



5-N 11 13-1874
HARVARD UNIVERSITY.



LIBRARY

OF THE

MUSEUM OF COMPARATIVE ZOÖLOGY.

7963.

Roland Hayward Library.

Substituted for H. A. Hagen copy.

Roland Hayman

ERRATA.

Page 2 hords should read hordes.

“ 2. substance should read subsistence.

“ 4. polygottus should read polyglottus

“ 5. Helmithrus should read Helminthoherus.

“ 8. Cicindelæ should read Cicindelidæ.

THE JOURNAL
OF THE
BOSTON ZÖOLOGICAL SOCIETY:

Edited by

ARTHUR P. CHADBOURNE AND H. SAVAGE.

VOLUME II.

BOSTON, MASS.;
PUBLISHED BY THE SOCIETY.
1883.

CONTENTS OF VOLUME II.

LIST OF PAPERS.

ANTHONY, A. C.	
<i>Lebia grandis</i> Hentz in Massachusetts	16
BRACKETT, F. H.	
Ornithological Notes from Minnesota	47
CHADBOURNE, A. P.	
First Capture of <i>Nauclerus forficatus</i> in Massachusetts	16
Birds around Boston during the Winter of 1882-3	31
Notes on New Brunswick Birds	50
COLEMAN, REV. N.	
The Colorado Potato Beetle Pupating above the Ground	32
CORY, C. B.	
Descriptions of Three New Species of Birds from Santo Domingo	45
HAGEN, DR. H. A.	
Notes on the American Badger (<i>Taxidea americana</i>)	29
HAYWARD, R.	
Rare <i>Lepidoptera</i> around Boston during the past Summer	65.56
A Note on <i>Acmæodera culta</i>	56
HAYWARD, R. AND SAVAGE, H.	
A Catalogue of the <i>Coleoptera</i> of the Green Mountains	12, 24, 36.
LAMB, C. R.	
Occurrence of the Swamp and White-throated Sparrows at Cambridge, Mass.. in Winter	32
<i>Dendroica palmarum palmarum</i> at Belmont, Mass.	55

MAYNARD, C. J.

The Mammals of Florida	1, 17, 38, 49
Hibernation of the Jumping Mouse	15
Notes on <i>Colaptes auratus</i> containing some Theories regarding Variation of Plumage	33
Occurrence of the Connecticut Warbler (<i>Oporornis agilis</i>) in Massa- chusetts in Spring	43
The Cuban Night Hawk (<i>Chordeiles popetue minor</i>) in Florida	44
Notes on the Differences between Cory's Shearwater, <i>Puffinus borealis</i> , and the Greater Shearwater, <i>Puffinus major</i>	53
The White Heron (<i>Herodias egretta</i>) at Quincy, Mass.	55

NOBLE, J. H.

Capture of a Panther in Vermont	16
---	----

TUELON, J. A.

A List of the Birds observed near Bradford, Penn.	8
---	---

THE
QUARTERLY JOURNAL
OF THE
BOSTON ZOÖLOGICAL SOCIETY.

Vol. II. — JANUARY, 1883. — No. 1.

CONTENTS:

PAGE.

THE MAMMALS OF FLORIDA. By <i>C. F. Maynard</i>	1
A LIST OF THE BIRDS OBSERVED NEAR BRADFORD, PENN.	
By <i>James A. Tuelon</i>	8
A CATALOGUE OF THE <i>COLEOPTERA</i> OF THE GREEN MOUNTAINS. By <i>R. Hayward</i> and <i>H. Savage</i>	12
GENERAL NOTES	15
Capture of a Panther in Vermont; The Hibernation of the Jumping Mouse; First Capture of <i>Nauclerus forficatus</i> in Massachusetts; <i>Lebia grandis</i> Hentz in Massachusetts.	

BOSTON, MASS.
PUBLISHED BY THE SOCIETY.

THE QUARTERLY JOURNAL
OF THE
BOSTON ZOÖLOGICAL SOCIETY,

A MAGAZINE DEVOTED TO THE STUDY OF AMERICAN ZOÖLOGY.

ESPECIALLY THE VERTEBRATA AND INSECTA.

In order to establish the Journal as a permanent Zoölogical publication, its patrons, it is hoped, will not only renew their own subscriptions, but will also use their influence to extend its circulation. The public in general are also notified that some of the most eminent American authorities in various branches of Zoölogy have promised their support and occasional contributions.

The Journal is the only magazine in the country which, while it does not restrict itself to but one branch of the science, is confined to the general study of American Zoölogy. Hence it appears that if sufficient pecuniary aid be obtained its final success is ensured.

TERMS.

FOR ONE YEAR . . (postage paid) . . 50 CTS. IN ADVANCE.

FOR ONE COPY . . " " . . 15 CTS.

All Remittances should be made to

**A. C. ANTHONY, 285 Marlborough Street,
Boston, Mass.,**

And should be sent by Registered Letter or P. O. Order on Boston; otherwise at the risk of the sender.

Communications intended for publication should be received at least one month before the publication of the number in which they are intended to appear.

The editorial supervision is in charge of

Messrs. A. P. Chadbourne and H. Savage,

to whom all articles should be sent.

Advertising Rates.—\$5.00 per page; \$3.00 per half-page; 20 cents per line (pica); a discount of 20 per cent for each subsequent insertion.

THE
QUARTERLY JOURNAL
OF THE
BOSTON ZOÖLOGICAL SOCIETY.

Vol. II.

January, 1883.

No. 1.

THE MAMMALS OF FLORIDA,

By C. J. Maynard.

An article on the Mammals of Florida appeared in the Bulletin of the Essex Institute (Vol. IV, 1872, Nos. 9 and 10) which embodied much of the present material, but as important changes have been made it has been judged advisable to reprint the entire list.

The following paper is the result of notes taken during eight winters' travel in Florida. These journeys were undertaken mainly for the purpose of studying the habits of the birds found in this region, but considerable attention was also paid to the mammals. The first trip was made during the winter of 1868-69, and subsequent trips have been made since, the last being in the winter of 1882. During this time nearly the whole state has been quite thoroughly explored.

Besides the notes upon the habits, distribution, etc., of the species given, some of which may perhaps be new, I have been able to add one species to the fauna of the United States, two to the eastern section of the Union and two to Florida. A few other mammals than those given may occur in the state, especially the smaller species, but I trust this will

prove a tolerably correct catalogue of the mammals which inhabit Florida.

1. *FELIS CONCOLOR* *Linn.* Panther, Tiger, Puma. — This large cat is very common on Indian River, in the interior and more southern sections of the state, but it is not found on the Keys. It is quite a formidable animal, growing sometimes to be eleven feet in length, measuring from the end of the nose to the tip of the tail, and if its courage corresponded with its size it would be a dangerous foe to the inhabitants. It is, however, exceedingly cowardly, and I never knew of any well authenticated instance of its attacking man, although some stories were related of its carrying away young children, which may have been true. The Puma is capable of performing such feats, for it possesses great strength. Capt. Dummett informed me that he had shot one near his plantation in the autumn of 1871, which had killed a full grown buck and was devouring it.

Like many of this family the Puma is nocturnal in its habits and remains concealed in the dense swamps and hummocks during the day, commonly reclining on the limb of a tree. It is said to drop upon its prey from such an elevation, and many old hunters warned me against passing through the thick woods in the early morning or late in the evening as they said that the Tigers were usually on the alert at such times and might be tempted to spring upon one if he were alone. It is very inquisitive when its dominions are invaded during the day, and will often follow the intruder for some distance, uttering a low, moaning cry, but is always careful to keep concealed.

Besides this peculiar low note it emits a variety of harsh sounds, some of which are only given during the night, and are quite terrifying when first heard, especially one in particular which resembles the scream of a woman in extreme

agony. This cry is more frequently given in March, when the males are in pursuit of the females. I think the young are dropped in the autumn. Skins of this animal which I have seen from Florida are of a decidedly rufous color without spots or bars. It may be well to remark that I have frequently heard, from hunters, of Tigers which were not only of a larger size than the common species, but which were said to be spotted. I never saw a specimen, but it is not impossible that the closely allied species *Felis onca* may be found here, although I hardly think it probable.

This species is now much less common than when the above was penned. I learned last winter that not more than three had been shot in the Gulf Hummocks in western Florida during five years.

2. *LYNX RUFUS Rafinesque*. Common Wild Cat. — This animal is abundant even on the borders of the settled districts. It is quite annoying to the planters, for it not only commits serious inroads on hen roosts, but frequently carries off young pigs. It is a nocturnal animal, and is seldom seen abroad during the day, but conceals itself in the thick hummocks. During the season when the males are in pursuit of the females it may be occasionally met with, especially in the morning and evening. At this time its loud and varied cries are heard, sometimes during the day, but oftener during the night. This is naturally a cowardly animal, and will invariably fly from man when it has the power to do so. The Wild Cats are only as large as setter dogs, yet they possess great strength, and a man requires considerable determination to attack one when placed in such a situation that it cannot escape. My friend, Mr. Thurston, once seized a full grown male, that was only slightly stunned by a charge of dust shot, and strangled it, but did not escape without receiving some scratches. Although shy when faced, they

will often approach quite near one when sleeping in the open air, and I have upon two occasions been awakened by their cries to find the beasts within a few feet of me, but upon my moving they instantly sprang away.

During the latter part of the Civil War these animals, being seldom hunted, became very numerous and bold. They were often seen walking along the tops of the fences in open day and were a great source of annoyance. They are rapidly becoming less common and are now seldom seen.

Florida specimens of this species are fully as large as those from more northern localities. I give the dimensions of a full grown male taken at Dunnett's. From nose to eye, 1.80; to ear, 4.78; to occiput, 6.00; to root of tail, 33.00; to outstretched hind leg, 48.00. Tail to end of vertebra, 7.75; to end of hair, 8.60. Length of hind leg, 7.00. Length of hand, 4.40; width, 2.00. In color Florida Wild Cats are much more rufous than those from the north, and are inclined to be more spotted.

3. *CANIS LUPUS* Linn. Gray Wolf. — The stronghold of these Wolves was in what is called the "Gulf Hummock" in western Florida, where they were quite numerous. According to Mr. F. A. Ober they were also found about the Kissinee River and Lake Okechobee. I saw the tracks made by a single animal near Salt Lake. It was accustomed to pass along a sandy road every night for the greater part of the time while we remained in the vicinity. My guide, Mr. Burton, who had resided near this place for some months, informed me that he had never seen it, nor had any of the settlers, although it was frequently heard to howl. I did not meet with any Wolves about Miami nor do I think that they occur south of the Everglades. Individuals who have frequently taken this species describe them as being very dark-colored, usually quite black.

I have been told that the last wolf was shot in the Gulf Hammocks some eight years ago. It is very probable that this was the last of the race in Florida.

4. *VULPES VIRGINIANUS* *Richardson*. Gray Fox. — Common in the wilder districts. This little Fox does not appear to do any great degree of mischief on the plantations, and it is probable that it finds sufficient wild game to satisfy its appetite. I once surprised one that was cautiously making its way towards a large bevy of quail with the evident intention of capturing some. Specimens from Florida are quite gray in color, especially upon the upper parts.

5. *PUTORIUS LUTREOLUS* *Cuvier*. Mink. — I saw a single specimen of this animal on the St. John's River above Blue Springs, which swam across the river but a short distance in advance of our boat. I did not learn that it was at all common, indeed nearly all the hunters seemed entirely unacquainted with it.

I found the Mink very plenty on the coast near the Cedar Keys where they frequented the salt marshes in search of clapper rails. Specimens examined were quite brown in color and the fur was short and scanty rendering the skins nearly worthless for commercial purposes. I often saw them swimming in the salt water.

One feature, noticed in skins of this species taken in Maine and New Hampshire, which I have never seen mentioned, is the presence of white hairs which are more or less numerous in the dark colors of the back. This species appears inclined to albinism, but the appearance of the white hairs is not the result of this disease, for in every instance that I have seen of an approach to albinism the fur turns white first and the hair afterwards.

6. *LUTRA CANADENSIS* *Sabine*. Otter. — Very abundant throughout the greater part of the state. I found them

as numerous on Indian River as in the interior, but did not meet with them at Miami, in the Everglades or among the Keys; they are abundant however in western Florida in all the streams which empty into the Gulf, quite down to the salt water. The fur is of little value in comparison with northern skins; the best winter pelts being worth but five dollars each in Boston. The usual price paid in Jacksonville is from seventy-five cents to one dollar, consequently they are not hunted much and therefore are not shy. They are quite inquisitive and will sometimes follow a boat for some distance, or approach any one standing upon the shore. At the same time they will utter a short, continuous grunt. Otters may frequently be seen chasing each other sportively through the water, and while we were in the vicinity of South Lake, my guide, Mr. Burton, called my attention to certain smooth paths in a sandy spot, which he said were Otter slides. They appear to amuse themselves by dragging their bodies over the smooth sand, just as the same species glide down snow-covered river-banks at the north. The slides in Florida were situated at some distance from the water.

The color of adult Otters from this state is strongly inclined to reddish-brown, but the young, which are dropped in February, are very dark. I think I never saw a more beautiful animal than a young specimen of this species which was captured at the head of Indian River by Mr. Thurston. It was only about two weeks old, yet was covered with a fine coat of exceedingly glossy fur.

7. *MEPHITIS MEPHITICA* *Baird*. Common Skunk.— This species seems to be restricted to the more northern portions of the State. Specimens taken in this region present the same variation regarding the distribution of the black and white which is noticeable in this animal elsewhere.

Although the amount of the above named colors is changeable, it is unusual to see the Skunk of a different hue; yet Mr. F. A. Ober of Beverly has a specimen which was taken in that place that is marked in a very singular manner, inasmuch as those portions which are usually black are in this instance pale brown or fawn. Two or three similar specimens have since come under my notice, one of which I once owned.

8. *MEPHITIS BICOLOR Gray*. Little Striped Skunk. — This pretty little species which, previous to my discovering it in Florida, was not known to occur east of the Mississippi, is very abundant in certain sections of the State. They are confined to the narrow strip of land which lies between Indian River and Turnbull Swamp, being found as far north as New Smyrna and south to Jupiter Inlet. They appear to take the place of the common skunk, which does not occur in this section. They frequent the scrub, and traces of them may be seen at all times, for they have the habit of digging small holes in search of insects, like the preceding species. These Skunks are easily domesticated and I have frequently known of their being used in the house, for the purpose of catching mice. Sometimes the animals are captured and the scent glands removed, but they are often simply decoyed about the premises by exposing food, when they will take up their abode beneath the buildings, and will soon become so tame as to enter the various apartments in search of their prey. I have since learned that this species is quite common in some sections of Ohio and that it is even found as far east as New York.

9. *PROCYON LOTOR Storr*. Raccoon. — Very numerous both upon the mainland and among the Keys, even frequenting the low mangrove islands which are overflowed by every tide. They subsist upon fish and crabs to a great

measure when upon the seashore, but in the interior they live chiefly upon the fluviatile mollusks (*Unio*, *Pomus*, etc.). They are strictly nocturnal, seldom appearing abroad during the day.

In color the Florida Raccoon differs from New England specimens in being more rufous; the black markings are not as conspicuous, the dark rings on the tail being sometimes nearly obsolete; in fact, adult specimens from Florida in this respect resemble those from New England.

(*To be Continued.*)

A LIST OF BIRDS OBSERVED NEAR BRADFORD, PENN.

By James A. Tuelon.

(*Concluded.*)

36. *ASTRAGALINUS TRISTIS*.—Very abundant. Remains late in the fall and may stay all winter when mild. Have taken eggs as late as August 12th. Incubation just commenced.

37. *POECETES GRAMINEUS*.—Common along the edges of the country roads (May 8th).

38. *ZONOTRICHIA LEUCOPHRYS*.—A fine male was brought to me on May 17. I saw another in the thick woods May 21.

39. *ZONOTRICHIA ALBICOLLIS*. I feel confident I have seen this species once or twice.

40. *JUNCO HYEMALIS*.—Abundant resident. Found a nest containing five fresh eggs on May 8, 1882.

41. *MELOSPIZA MELODA*.—The first to arrive and the most common of all our sparrows.

42. *MELOSPIZA PALUSTRIS*.—Seen but once.

43. *SPIZELLA SOCIALIS*.—Common, breeds as in Massachusetts.

44. *SPIZELLA PUSILLA*.—Undoubtedly common, but have only one specimen.

45. *PASSER DOMESTICUS*.—Abundant in the streets of the city. It nests in the brackets under the cornices of houses, where it is a general nuisance.

46. *GUIRACA LUDOVICIANA*.—Common. First seen May 25. On May 30 I found a nest with four eggs, incubation just commenced. June 19, I found a nest containing no eggs and on the same day two young birds well feathered.

47. *PIPILO ERYTHROPHthalmus*.—Common on the side hills among dead trees and underbrush. The earliest record was April 9.

48. *CYANOSPIZA CYANEA*.—Perhaps common, although I have seen but few.

49. *MOLOTHUS PECORIS*.—I have this species in my list, but have never found its eggs.

50. *AGELÆUS PHENICEUS*.—Common.

51. *ICTERUS BALTIMORE*.—One specimen was brought to me this spring which is the only one I have seen. I was told at the time that a certain plowed field was "full of them."

52. *QUISCALUS VERSICOLOR*.—Quite common in localities.

53. *CYANURUS CRISTATUS*.—Common resident.

54. *CORVUS AMERICANUS*.—Common.

55. *TYRANNUS CAROLINENSIS*.—Have seen a few only.

56. *SAYORNIS FUSCUS*.—Apparently quite common (April 24).

57. *CONTOPUS VIRENS*.—Probably common. Have seen but one or two.

58. *EMPIDONAX MINIMUS*.—Common. A nest with four fresh eggs was taken June 16.

59. *CERYLE ALCYON*.—Have seen this species but once. This was in July, about five or six miles up the west branch, where a dam had formed a small pond.

60. *ANTROSTOMUS VOCIFERUS*.—Reported from Little Boyd. Have not seen it myself.

61. *CHORDEILES POPETUE*.—Common.

62. *CHÆTURA PELAGICA*.—I have this species in my list but may be mistaken. I do not think it common.

63. *TROCHILUS COLUBRIS*.—Common (June 11, and September 10).

[*COC CYGUS*? One day this spring I saw a cuckoo, but whether the Yellow or Black-billed I cannot say. Think it comparatively rare as I should probably have seen it in some of my wanderings.]

64. *PICUS VILLOSUS*.—Not very common. More plenty in fall. Have seen it from April 2 to 24, and from November 4 to 6.

65. *PICUS PUBESCENS*.—Common resident. Much more common than the preceding. I saw several April 15, 1881. They appeared to be mating although the snow in the thick hemlock woods was in places waist deep.

66. *SPHYROPICUS VARIUS*.—Very common summer resident. Indeed it appears to be the most numerous of the woodpeckers. April 16 is the earliest date I have for their arrival.

67. *MELANERPES ERYTHROCEPHALUS*.—In the fall of 1881 and the spring of 1882 this species was very common in one locality. In the fall of 1881 I found them near a clearing gathering beech-nuts. I sent a communication to the "Forest and Stream" to that effect under the pseudonym of "Sialia." I was told that they remained during mild winters.

The winter of 1880-81 was unusually severe, that of 1881-82 equally mild, and I have no doubt they remained here all of last winter.

68. *HYLOTOMUS PILEATUS*.—In the fall of 1881 this species was reported to me from Wolf Run, and in the winter I saw several hanging in front of an eating saloon. On April 2, 1882, I saw one and heard another near the town. The one I saw was very shy. They remained here about two weeks, since then I have not seen them.

69. *COLAPTES AURATUS*.—Common.

70. *SYRNIIUM NEBULOSUM*.—I saw two this spring.

[*FALCO COLUMBARIUS*.—Have frequently seen some small hawk, but whether of this species or not I cannot say].

71. *BUTEO BOREALIS*.—I have seen perhaps half a dozen in all.

72. *ECTOPISTES MIGRATORIUS*.—A few strayed over here from the nesting ground in Potato Creek, but I have never met with it.

73. *BOXASA UMBELLUS*.—I have occasionally flushed a bird but it is not very common.

74. *PHILOHELA MINOR*.—I flushed one last summer. From reports I judge they are not as plentiful as sportsmen desire.

75. *RYACOPHILUS SOLITARIUS*.—One specimen was brought to me this spring (May 21), I afterwards saw another. I think there may be a few along the larger brooks.

76. *CYGNUS AMERICANUS*.—A specimen has been on exhibition, taken near Limestone, N. Y., a few miles from here.

77. *QUERQUEDULA DISCORS*.—I saw one specimen in the fall of 1880.

A CATALOGUE OF THE *COLEOPTERA* OF THE GREEN MOUNTAINS.

By R. Hayward and H. Savage.

The following "Catalogue of the *Coleoptera* of the Green Mountains" is based chiefly upon a collection made in the northern sections of the range during the summers of 1881 and 1882. A number of species contained in this paper, however, were collected by Mr. P. S. Sprague on Camel's Hump Mountain, Vt., and in its vicinity; these are now in the collection of the Boston Society of Natural History. Species not taken by the authors are recorded with the name of the collector in parenthesis.

As it is only by the publication of local lists that the distribution of our *Coleoptera* can be ascertained, the authors think that the present one, incomplete as it is, may be of some assistance in determining the coleopterous fauna of the sections of which it treats.

It is especially interesting to compare this catalogue with a similar one of Mount Washington *Coleoptera*, by Mr. E. P. Austin, which was published in the Proceedings of the Boston Society of Natural History. The difference between the lists will be found to be exceedingly great; much greater than one would suppose, considering the slight distance by which they are separated.

Cicindelidae.

Cicindela 6-guttata Fab.

Cicindela purpurea Oliv. Common
near the foot of the mountains.

Cicindela uncociscoensis Harr.
Rare; only two specimens taken.

Cicindela vulgaris Say.

Cicindela 12-guttata Dej. *

Cicindela repanda Dej.

Cicindela hirticollis Say. Rare.

Cicindela punctulata Fab. Rare.

*Curabidae.**Notiophilus sylvaticus* Esch.

(Sprague.)

Nebria pallipes Say.*Calosoma calidum* Fab.*Curabus serratus* Say.*Cychnus lecontei* Say.*Scarites subterraneus* Fab.*Brachynus cyanipennis* Say.*Galerita janus* Fab.*Lebia pumila* Dej. (Sprague.)*Cymindis pilosa* Say.*Cymindis borealis* Lec. Not uncommon.*Pinacodera limbata* Dej.*Pinacodera platycollis* Say.*Calathus gregarius* Say.*Platynus brunneomarginatus* Mann.

Rare.

Platynus sinuatus Dej.*Platynus extensicollis* Say.*Platynus anchomenoides* Rand.*Platynus notatus* Say.*Platynus obsoletus* Say. (Sprague.)*Olisthopus micans* Say.*Pterostichus honestus* Say.

(Sprague.)

Pterostichus voracinus Newm.

(Sprague.)

Pterostichus stygius Say.

(Sprague.)

Pterostichus punctatissimus Rand.

(Sprague.)

Pterostichus sayi Brullé.*Pterostichus lucubundus* Say.*Pterostichus caudiculis* Say.*Pterostichus corvinus* Dej. The commonest species of *Pterostichus*.*Pterostichus mutus* Say. (Sprague.)*Pterostichus erythropus* Dej.*Pterostichus mundibularis* Kirby.

(Sprague.)

Myas cyanescens Dej.*Amara arida* Say. (Sprague.)*Amara hyperborea* Dej.*Amara latior* Kirby.*Amara pallipes* Kirby.*Amara obesa* Say.*Chlaenius aestivus* Say.*Chlaenius sericeus* Forst.*Chlaenius leucoscelis* Chev.

(Sprague.)

Chlaenius tricolor Dej. (Sprague.)*Chlaenius tomentosus* Say.*Agonoderus comma* Fab.*Anisodactylus rusticus* Dej.*Anisodactylus nigerrimus* Dej.*Anisodactylus baltimorensis* Say.*Anisodactylus lugubris* Dej.

(Sprague.)

Anisotarsus terminatus Say.

(Sprague.)

Brachyrellus rupestris Say.

(Sprague.)

Harpalus erraticus Say. Common.*Harpalus viridiveneus* Beauv.*Harpalus caliginosus* Fab.*Harpalus faunus* Say.*Harpalus pennsylvanicus* Deg.*Harpalus compar* Lec.*Harpalus fallax* Lec.*Harpalus herbivagus* Say.*Patrobis longicornis* Say.

(Sprague.)

Patrobis septentrionis Dej.

(Sprague.)

Trechus chalybeus Mann.

(Sprague.)

Cnemidotus 12-punctatus Say.

Cnemidotus edentulus Lec.

(Sprague.)

Dytiscidæ.

(Sprague.)

Hydroporus inaequalis Fab.

(Sprague.)

Hydroporus turbidus Lec.

(Sprague.)

Hydroporus lacustris Say.

(Sprague.)

(Sprague.)

Hydroporus rotundatus Lec.

(Sprague.)

Hydroporus griseostriatus Deg.

(Sprague.)

Hydroporus undulatus Sav.

(Sprague.)

Hydroporus spurius Lec.

(Sprague.)

Hydroporus modestus Aubé.

(Sprague.)

Hydroporus dichrous Mels.

(Sprague.)

Acilius semisulcatus Aubé.

Dytiscus confluens Sav. Rare.

Ilybius bianttalus Germ.

Coptotomus interrogatus Fab.

Gaurodytes parallelus Lec.

Halipidae.

Gyrinidae.

Dineutus vittatus Germ.

Dinentus discolor Aubé.

<i>Gyrinus dichrous</i> Lec. (Sprague.)	<i>Philhydrus ochraceus</i> Mels.
<i>Gyrinus affinis</i> Aubé.	(Sprague.)
<i>Gyrinus picipes</i> Aubé. (Sprague.)	<i>Philhydrus cinctus</i> Say. (Sprague.)
<i>Gyrinus borealis</i> Aubé.	<i>Hydrobius subcupreus</i> Say.
<i>Gyrinus minutus</i> Fab. (Sprague.)	(Sprague.)
	<i>Ceryon ocellatum</i> Say. (Sprague.)

*Hydrophilidae.**Hydrocharis obtusatus* Say.

(To be Continued.)

GENERAL NOTES.

CAPTURE OF A PANTHER IN VERMONT. — On November 24, 1881, a Panther (*Felis concolor*) was killed at Barnard, Vt. The animal measured 7 feet in length and weighed 182½ pounds. About the time this Panther was shot another, probably its mate, was seen several times but was not secured. This present autumn (1882) it was also seen and traced in the snow, but, I believe, has not yet been killed.

The only other Panther which has been taken in the State for many years, is the one which was shot at Weathersfield, January 31, 1867. (See Bull. Mus. Comp. Zool. Vol. I. 1869. page 153.)—*J. H. Noble, Cambridge, Mass.*

THE HIBERNATION OF THE JUMPING MOUSE.—Although Professor Orton, some years ago, gave an instance of the hibernation of this species, I think that no one has since published anything on the subject. As I have several times found this little mouse in the dormant state, a few notes may be of interest.

The Jumping Mouse (*Jacutus hudsonius*) enters the ground before the frosts set in, and makes a burrow from

five to seven feet in depth, usually in sandy soil. At the end of this burrow it constructs a nest of dried grass in the middle of which it lies curled up, in an unconscious state. Those which I removed appeared exactly as if dead, except that they were limp, and on very close inspection the breath was seen to be drawn in and exhaled at long intervals. When placed near a fire they revive but apparently do not object to being handled. They will not eat, but, if left to themselves, retreat to some cool corner of the room, coil up under the first convenient object and again return to their slumbers. In fact all the actions of the animal show that this peculiar stupor is their normal state during the winter, and one which they do not wish to have interrupted. No food is ever found in the nest or burrow.—*C. J. Maynard. Boston. Mass.*

FIRST CAPTURE OF *NAUCLERUS FORFICATUS* IN MASSACHUSETTS.—Mr. R. L. Newcomb of Salem, Mass., has in his possession a specimen of the Swallow-tailed Hawk (*Nauclerus forficatus*) which was shot “in Amesbury, Mass., near that part known as the ‘Pleasant Valley.’ The bird was seen sitting alone, on a tree near the Merrimac River; was stalked and shot on or about September 25.”

This is the first instance of the capture of this species in Massachusetts, though a specimen was seen at Whately, Mass., some years since. (See Allen Am. Nat. III (1870), p. 645.)—*Arthur P. Chadbourne. Boston. Mass.*

LEBIA GRANDIS HENTZ IN MASSACHUSETTS.—Not long since, while collecting in Boston, I found a specimen of *Lebia grandis* Hentz. This is, as far as I can ascertain, the first time this beetle has been taken on the Atlantic coast north of Pennsylvania.—*A. C. Anthony, Boston, Mass.*

HELIOTYPE.

PERMANENT PHOTOGRAPHIC BOOK ILLUSTRATIONS.

The Heliotype Printing Company

ARE PRODUCERS OF ILLUSTRATIONS BY THE

Most approved Photo-Mechanical, Photo-Lithographic and Photo-Engraving Processes.

Employed by the United States Government in illustrating Scientific and Medical reports;
by Scientific, Historical, and other learned Societies; by the leading Publishers, and for illustrating Town and Family Histories,
Trade Catalogues, Show Cards, &c.

Facsimiles of Medals and Coins, Ancient Manuscripts, Paintings, Drawings,
Sketches, and Autograph Circulars, Views and Portraits from Nature,
Medical and Scientific Objects, Antiquities, etc.

Special attention paid to the reproduction of Architects', Engineers', and Surveyors' Drawings.

Estimates and Specimens furnished on application.

THE HELIOTYPE PRINTING COMPANY,

211 Tremont Street, Boston.

NEAR BOYLSTON STREET.

C. J. MAYNARD & CO.

PUBLISHERS AND DEALERS IN

**BIRDS' SKINS AND EGGS,
And Naturalists' Supplies,**


(Established in 1864.)

304 WASHINGTON STREET, BOSTON, MASS.

We would especially call attention to our large Stock of Birds' Eggs and Naturalists' Supplies. Send for Catalogue, addressing as above.

Works on Natural History at Reduced Prices.

		Formerly.
Siebold's Anatomy of the Invertebrates	\$4.00	\$5.00
Owen's " " " (Out of print)	6.00	8.00
Gould's Invertebrates of Mass. (Scarce)	12.00	15.00
Schafer On the Microscope	1.50	2.00
Primer of the Microscope	2.50	5.00
Coues's Ornithology. (Last edition)	2.25	4.50
Lovell's Mollusks. (Colored plates)	3.25	4.75
Science Gossip	1.25	2.50
Wyatt's Natural History	3.25	6.00
Vegetable World. Figuier. (Half calf)	4.50	6.00
Jay's Catalogue of Shells. (Colored plates)	2.50	5.00
Report of Museum of Comparative Zoology25	.50
Year Book of Facts50	1.00
Annual Record of Science	1.00	1.50
Gosse's Romance of Natural History	2.00	3.50
Nicholson's Zoology	2.50	3.00
Trees, Plants, and Flowers. Laer.	3.25	6.00
Wood's Natural History	2.00	3.50

 Send for a Complete List.

N. R. CAMPBELL & CO.

17 TREMONT STREET, BOSTON, MASS.

CHOICE WINTER OVERCOATS.

We have now in stock, and shall continue to manufacture through the season, the same grade of goods in the line of **ready-made Winter Overcoats** that has heretofore proved so satisfactory to gentlemen looking for the best substitute at short notice for a custom-made garment.

We mention some of the fabrics that have been used in making up our present assortment: Scotch black and blue Elysians, from J. & J. Crombie; Scotch extra heavy Diagonals, from Walter Scott & Son; plain and mixed Cheviots, from same; West-of-England Kerseys and Pilots, from Marling & Co.; German Elysians and Beavers, from Schnabel Bros.; domestic Friezes, in blue and brown mixtures, from Georges River Mills, and black and mixed American Chinchillas. Also, a heavy American diagonal overcoating in black and in Oxford and red mixtures, made specially for our house.

All our ready-made articles may be referred to as being the result of thirty years' experience in making the best goods the market would take, and as being sold at prices sufficiently favoring the buyer. In the line of winter overcoats, selections can be made at from \$20.00 to \$42.00.

Macullar, Parker & Company.

400 Washington Street, Boston.

112 Westminster Street, Providence.

JOHN P. DALE & CO.
BOOKBINDERS,

Chambers, 17 Boylston St., Boston.

BOOKBINDING IN ALL ITS BRANCHES

PROMPTLY AND FAITHFULLY EXECUTED.

Particular attention to binding

BIBLES and PRAYER BOOKS of all descriptions. ENCYCLOPÆDIAS
of all kinds, PICTURESQUE AMERICA, COLLEGE CLASS
BOOKS, PICTURESQUE EUROPE AND WORLD,
THE ART JOURNAL, ALBUMS, Etc.

ALL GRADES OF LEVANT, MOROCCO, AND HALF-MOROCCO BINDINGS.

Cloth binding in every variety of style: Sheep binding in law or common styles.

School Books and Directories.

Pamphlets bound at shortest notice.

JOHN P. DALE & CO.
17 BOYLSTON STREET,
BOSTON, MASS.

J. L. FAIRBANKS & CO.

Stationers and Account-Book Manufacturers,

288 WASHINGTON STREET,

OPPOSITE SCHOOL STREET,

BOSTON.

J. W. STANIFORD,

MANUFACTURER OF

Homœopathic & Specimen Phials,

AND DEALER IN

CHEMICALS, GLASS WARE, GLASS TUBING, Etc.

NO. 23 ELM STREET,

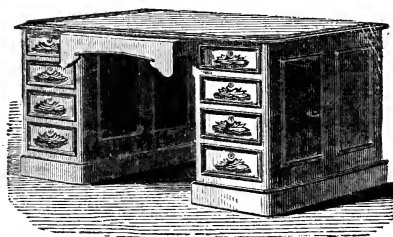
BOSTON, MASS.

SPECIALTIES

FOR THE

OFFICE, STUDY & LIBRARY,

STUDY TABLE.



STYLOGRAPHIC
PENS,

DANNER
BOOK CASES,

DICTIONARY
HOLDERS,

BOOK CASE.



FOLIO STANDS, ADJUSTABLE TABLES,
STATIONERY, Etc., Etc.

New England School Furniture Co.

27 & 33 FRANKLIN STREET.

NATURAL HISTORY STORE.

168 TREMONT ST., BOSTON, MASS.

W. J. KNOWLTON.

A specialty made of supplies for Naturalists and Taxidermists.

A Case of Instruments for Taxidermists, put up in best manner and
with superior quality of Tools, for \$12.

Ordinary dissecting case \$4.

Also mounted Birds. Birds' Skins, Eggs, Minerals, and Shells. and
Natural History Specimens.

Livermore Stylographic Pen—An Indispensable Instrument.

The value of an article is almost always indicated by its price, and for years the people were content to pay \$3.00 for a genuine Livermore Stylographic Pen, and the same pens are yet doing good service. The success of these pens led unscrupulous persons to get up inferior imitations, which they offered at such low prices that many persons not understanding the difference, were induced to buy them. The Livermore Company, therefore, cut down the price of their short plain pens to \$2.00, and short gold mounted to \$2.50 each, to give everybody a chance to have the best article of the kind. You can buy them for that money by remitting the amount to LOUIS E. DUNLAP, Manager Stylographic Pen Co., 290 Washington Street, Boston; the pen, together with a package of superior ink will be sent by return mail, and the money will be at once refunded if they do not prove to be perfect and satisfactory in every respect. There is nothing more appropriate than a Stylograph as a gift to a lady or gentleman. The Stylographic Pen Co., who manufacture the Livermore Pen, is the largest concern of the kind in the world, with branches at New York, Chicago, and London, Eng. The Livermore Stylographic Pen is a pencil which writes ink, never needs sharpening and never wears out, and has been adopted by over 500,000 knights of the quill in this country and abroad. Any one who has learned to use a Livermore Pen will not be persuaded to do without it, and any one who has not learned to use one should get one at once.

THE
QUARTERLY JOURNAL
OF THE
BOSTON ZOÖLOGICAL SOCIETY.

Vol. II. — **APRIL, 1883.** — No. 2.

CONTENTS:	PAGE.
THE MAMMALS OF FLORIDA. By <i>C. F. Maynard</i>	17
A CATALOGUE OF THE <i>COLEOPTERA</i> OF THE GREEN MOUNTAINS. By <i>R. Hayward</i> and <i>H. Savage</i>	24
NOTES ON THE AMERICAN BADGER (<i>TAXIDEA AMERI- CANA</i>). By <i>Dr. H. A. Hagen</i>	29
GENERAL NOTES	31
Birds around Boston during the Winter of 1882-3; Occurrence of the Swamp and White- throated Sparrows at Cambridge, Mass., in Winter; The Colorado Potato Beetle Pupating above the Ground.	

BOSTON, MASS.
PUBLISHED BY THE SOCIETY.

THE QUARTERLY JOURNAL
OF THE
BOSTON ZOÖLOGICAL SOCIETY,

A MAGAZINE DEVOTED TO THE STUDY OF AMERICAN ZOÖLOGY,
ESPECIALLY THE VERTEBRATA AND INSECTA.

In order to establish the Journal as a permanent Zoölogical publication, its patrons, it is hoped, will not only renew their own subscriptions, but will also use their influence to extend its circulation. The public in general are also notified that some of the most eminent American authorities in various branches of Zoölogy have promised their support and occasional contributions.

The Journal is the only magazine in the country which, while it does not restrict itself to but one branch of the science, is confined to the general study of American Zoölogy. Hence it appears that if sufficient pecuniary aid be obtained its final success is ensured.

TERMS.

FOR ONE YEAR . . (postage paid) . . 50 CTS. IN ADVANCE.

FOR ONE COPY 15 CTS.

All **Remittances** should be made to

**A. C. ANTHONY, 285 Marlborough Street,
Boston, Mass.,**

And should be sent by Registered Letter or P. O. Order on Boston; otherwise at the risk of the sender.

Communications intended for publication should be received at least one month before the publication of the number in which they are intended to appear.

The editorial supervision is in charge of

Messrs. A. P. Chadbourne and H. Savage,

to whom all articles should be sent.

Advertising Rates.—\$5.00 per page; \$3.00 per half-page; 20 cents per line (pica); a discount of 20 per cent for each subsequent insertion.

THE
QUARTERLY JOURNAL
OF THE
BOSTON ZOÖLOGICAL SOCIETY.

Vol. II.

April, 1883.

No. 2.

THE MAMMALS OF FLORIDA.

By C. J. Maynard.

(Continued from page 8.)

10. *URSUS AMERICANUS Pallas.* Black Bear. — Very common, especially in the unsettled districts; giving the inhabitants considerable trouble by destroying young pigs. Although extremely abundant in certain sections, as the numerous tracks indicate, it is difficult to see one, for they chiefly move about during the night. The Bears of Florida do not hibernate, but are not quite as active during the winter months as in summer. The young are born in early spring, after which the females are said to be somewhat dangerous, especially if surprised when with their cubs; but at other times both sexes are arrant cowards. They will not even molest one when sleeping, but will always avoid the presence of man when aware of it. I have made my bed in a Bear path and, in the morning, found by the tracks made by them in the night that they made a wide circuit rather than pass near me.

The food of Florida Bears is variable. During the early winter they feed on the berries of the common and the saw

palmettos; later in the season they eat the tender new growth or buds of the above-mentioned plants, for this purpose they will climb the tallest palmetto and with their strong claws will tear out the "cabbage," as the new growth is sometimes called, and eagerly devour it. The removing of this bud is no easy task even to an experienced person provided with an axe, yet Bruin's great strength enables him to force the tough leaf-stalks asunder with the greatest of ease. Trees which have been treated in this rough manner invariably die, and a large number may be seen in this condition in any cabbage swamp.

When the king or horseshoe crabs come on shore to deposit their spawn, the Bears resort to the shore, and, after turning the crustaceans over, scoop out their softer parts. They are also aware of the time when the sea turtles lay, and during the months of June and July walk the beaches nightly and devour the eggs. Indeed, so persistently do they hunt for them that it is almost impossible to find a nest that has been undisturbed.

The Bears of this State are fully as large as those from New England, and the hair is as dark colored. I have also seen skins that were but little inferior to northern ones in wooliness, but generally they are only covered with hair. One which I procured at Dummet's in the winter of 1869 is singularly marked, for it has brownish lines starting from the point of each shoulder and extending down the legs on the inside. The other portion of the hair is black. The young, for a year or two, are strongly inclined to reddish-brown. The Bears inhabit the entire portion of the mainland, but are seldom found on the Keys.

11. *CARIACUS VIRGINIANUS Gray.* Common Deer.—Very numerous in almost all sections. The Deer of Florida are not likely to be exterminated very soon, not only be-

cause of their abundance, but because the inhabitants do not kill them wantonly, knowing that they are extremely valuable to them for food, and the tourists who possess sufficient skill to capture any number of them are scarce.

When we first attempted to hunt Deer we were almost always unsuccessful, even rarely being able to see one, and were informed by the hunters that we did not go out at the right time. Upon questioning them they told us that the Deer were governed in their time of feeding by the moon. An hour before moonrise the animals arose from their beds or came out of the hummocks to feed upon the grass in the clearings, or in the piny woods, continuing until after the moon was up. An hour before the moon southed (*i. e.*, attained its highest altitude) they did the same thing, and also when it was directly beneath the earth, making in all eight hours' feeding time. At first I laughed at this as an old hunter's notion, for although it is easy to understand why the Deer should feed at those times when the moon rises near night and sets near morning, it is difficult to perceive why they should conform to the same rule through all the varying phases. But after three seasons experience I am obliged to acknowledge that as far as my observation extends this theory is correct. The Deer are certainly seen feeding much more frequently during these stated times than at others. Of course one occasionally meets a straggling animal at other hours, but I never found any number on their feet at any other time. All the hunters with whom I have conversed also confirm this. Another singular fact is that the great horned owls hoot at the feeding time of the Deer, even if it be broad daylight. I have observed this fact on many occasions, and the hunters, when they hear the owls, say "now the Deer are feeding."

Early in February the Deer moult. The bucks then lose

their horns and the does are heavy with young, which they drop in March. Before the moult the hair is of a bluish color, but after shedding they take on a sleek coat of fine reddish hue. This animal is found in all sections, even on the Keys. They inhabit small islands where they can obtain little or no fresh water, yet Deer from these localities are noticeably larger than those from the mainland. Of this fact I have been assured by Lord Parker, an English gentleman who has spent several winters in Florida, and who has killed a large number of these animals in all sections of the state.

12. *TRICHECHUS MANATUS* Linn. Manatee.—This singular animal is found in large numbers about the inlets of Indian River, and Capt. Dummett informs me that he has captured specimens as far north as his place, which is within five miles of the head of the river. I have been informed by creditable authorities that it is remarkably abundant upon the western coast in the various rivers and creeks which abound between Tampa Bay and Cape Sable. I have never seen it in Mosquito or Halifax Lagoons and am confident that it does not occur there. This species is said to feed upon the leaves of the mangrove during the night. It does not now occur on the west coast, thus it is confined to the Indian River, where possibly a few may still be found; but the species is nearly extinct in Florida.

13. *DELPHINUS EREBENNUS* Cope. Porpoise.—A large number of Porpoises, which I take to be this species, occur abundantly about the bays, salt water rivers and along the entire coast of Florida. It is also probable that a second species may be found.

14. *LASIURUS NOVEBORACENSIS* Gray.—Red Bat. Common in the more northern sections of the state, frequenting the woods. During the day they rest hanging head down-

wards upon the leaf of a tree. Specimens captured are not only smaller in size than those from the north, but are much deeper in color; the fur, however, is generally tipped with ash.

15. *SCOTOPHILUS FUSCUS* *H. Allen*. Carolina Bat.—Common throughout the northern sections, but more abundant in the vicinity of settlements.

I once captured a female specimen of this species which was heavy with young, placed her in a cage and left her. After an absence of an hour or so I returned and found that she had escaped, but had left a young one clinging to the woodwork on the side. The little thing was entirely naked, but was furnished with teeth, which it showed when handled and endeavored to bite, squeaking after the manner of all these animals. I replaced it in the cage, where it remained until night, but in the morning it was gone and I supposed that its mother had carried it away.

16. *SCOTOPHILUS GEORGIANUS* *H. Allen*. Georgia Bat.—Two Bats which I have in my collection, that were shot about ten miles south of Salt Lake, I think are of this species. The specimens were taken in the evening and were flying about near a small pond in the piny woods.

17. *NYCTICEJUS CREPUSCULARIS* *H. Allen*.—Mr. J. A. Allen in the "Bulletin of the Museum of Comparative Zoology" (Vol. II, No. 3, p. 174) states that there is a specimen of this Bat in the museum at Cambridge which was collected in Florida by Mr. Charles Belknap.

18. *CORYNORHINUS MACROTIS* *H. Allen*. Big-eared Bat.—Dr. Harrison Allen in his monograph of North American Bats (p. 55) cites a specimen of this species which was collected in Micanopy, Florida, by Dr. Bean.

19. *NYCTINOMUS NASUTUS* *Tomes*.—A Bat was shot by a member of my party on the St. John's River, near Jack-

sonville, early in the winter, which I am confident was of this species. This specimen was unfortunately lost. I have since picked up a mutilated specimen in the streets of Jacksonville which was undoubtedly this species; thus the matter of its occurrence in Florida is definitely settled.

20. *ARTIBEUS PERSPICILLALUNE* *Maynard*. Tailless Leaf-nosed Bat.—While at Key West in the early winter of 1870, I observed several large Bats flying about the city, which closely resembled in flight a species which I had seen in northern Florida two years before, but which flew so high that I was unable to shoot them. I was very anxious to obtain a specimen, but as shooting was prohibited in the streets of the city of Key West, and as I never saw the Bats elsewhere on the Island, feared that I should be obliged to go away without one. I was, therefore, agreeably surprised one morning to see a boy enter my room with a Bat in his hand, which from its large size I knew could be no other than the species which I had so long desired to obtain. He said that he had found it hanging upon the leaf of a tree and had killed it with a piece of limestone. It is a Leaf-nosed Bat, and Dr. Harrison Allen has kindly identified it, from sketches sent to him, as the above species. This is, I think, the first instance on record of a Bat of this form being taken on the Atlantic slope. This species, without doubt, inhabits the whole of Florida. They fly early in the evening, often before sunset, and, as has been remarked, usually very high.

None of the Bats of Florida appear to hibernate, or at best they only remain quiet during an occasionally cold night.

21. *BLARINA BREVICAUDA ET TALPOIDES* *Baird*. Mole Shrew.—I found a single specimen of this little species in an unused cistern at Miami. I have never seen it elsewhere in the state, although it probably occurs.

22. SCALOPS AQUATICUS *Fischer*. Shrew Mole.—Very common at Blue Spring, where they do considerable damage by disturbing the roots of vegetables and plants in the cultivated fields. They are also said to eat sweet potatoes. They form their burrows only an inch or two below the surface; throwing up ridges so that their presence is readily detected. This work is usually performed during the night.

23. SCIURUS NIGER *Linn*. Southern Fox Squirrel.—Quite common in the piny woods, but I do not think that they are ever to be found in the hummocks. They feed upon the seeds of the pines and are therefore usually found in the tops of the trees which are commonly high; thus it is quite difficult to procure specimens, as on the approach of the hunter they conceal themselves among the thick foliage. They are extremely variable in color, specimens being found which exhibit all shades of coloration from pale rufous to black or dusky. The latter colors predominate, however. I think this species is confined to the more northern portions of the state, as I have never seen it at Miami.

24. SCIURUS CAROLINENSIS *Gmelin*. Gray Squirrel.—Very abundant in the northern and central sections of the state, but singularly I did not see it at Miami, or among the Keys. They inhabit the hummocks and are seldom seen in the piny woods. They have much the same habits as those which inhabit New England. But I cannot now remember of ever having seen a nest of sticks and leaves such as this species construct in the north. Specimens are not only smaller in size, but are also more rufous than northern individuals. I have never seen a specimen of the black variety in Florida and am confident that it seldom, if ever, occurs.

25. *GEOMIS PINETI Rafinesque*. Salamander. — This singular animal is confined to the more northern portions of the state, none being found south of Lake Harney. They inhabit the dry pine barrens, where in the process of burrowing they throw up little mounds which in some sections are quite numerous. They are provided with large cheek pouches, with which they are said to convey the earth to the surface. The Salamander is seldom seen abroad during the day, and if they ever leave the burrows it is in the night. When by any accident they appear above ground in the daylight, they seem confused and may be readily captured.

26. *MUS DECUMANUS Pallas*. Brown Rat.—Found abundantly at Jacksonville, not only in the city but on the neighboring plantations. I do not remember of having observed it elsewhere in Florida. I have never seen a specimen of the common mouse (*Mus musculus*) in the state.

(*To be Continued.*)

A CATALOGUE OF THE COLEOPTERA OF THE GREEN MOUNTAINS.

By R. Hayward and H. Savage.

(*Continued from page 15.*)

Staphylinidæ.

Tachinus fumipennis Say.

Creophilus villosus Grav.

Staphylinus maculosus Grav.

Staphylinus vulpinus Nordm.

Staphylinus fossator Grav.

Philonthus cyanipennis Fab.

Philonthus lætulus Say.

Gyrophypnus obscurus Er.

(Sprague.)

Cryptobium bicolor Grav.*Lithocharis confluens* Say.
(Sprague.)*Oxyporus rufipennis* Lec.
(Sprague.)*Anthobium dimidiatum* Mels.
(Sprague.)*Silphidae.**Necrophorus marginatus* Fab.*Necrophorus orbicollis* Say.*Necrophorus tomentosus* Web.*Silpha surinamensis* Fab.*Silpha lapponica* Hb.*Silpha noveboracensis* Forst.*Silpha inæqualis* Fab.*Silpha americana* Linn.*Latridiidae.**Conithassa lirata* Lec. (Sprague.)*Latridius cavicollis* Lec. (Sprague.)*Latridius pictus* Lec. (Sprague.)*Dermestidae.**Byturus unicolor* Say.*Dermestes lardarius* Linn.*Dermestes maculatus* Deg.*Anthrenus museorum* Linn.
(Sprague.)*Endomychidae.**Mycetina vittata* Fab.*Endomychus biguttatus* Say.*Mycetophagidae.**Mycetophagus flexuosus* Say.
(Sprague.)*Typhoea fumata* Linn.
(Sprague.)*Erotylidae.**Dacne 4-maculata* Say.
(Sprague.)*Megalodacne fasciata* Fab.*Mycetotretus pulchra* Say.
(Sprague.)*Triplax thoracica* Say. (Sprague.)*Cucujidae.**Cucujus clavipes* Fab.*Laemophloeus biguttatus* Say.
(Sprague.)*Laemophloeus fasciatus* Mels.
(Sprague.)*Colydiidae.**Cerylon castaneum.* Say.
(Sprague.)*Cerylon* var. *unicolor* Ziegl.
(Sprague.)*Trogositidae.**Trogosita mauritanica* Linn.
(Sprague.)*Trogosita corticalis* Mels.*Trogosita* var. *intermedia* Horn.*Trogosita* var. *dubia* Horn.*Ostoma ferruginea* Linn.
(Sprague.)*Gyrnocharis 4-lineata* Mels.
(Sprague.)*Thymalus fulgidus* Er.*Nitidulidae.**Conotelus obscurus* Er. (Sprague.)*Nitidula bipustulata* Linn.*Omosita colon* Linn.*Phenolia grossa* Fab. (Sprague.)*Ips 4-guttatus* Fab.*Ips sanguinolentus* Oliv.

Phalacridæ.*Olibrus semistriatus* Lec.

(Sprague.)

Coccinellidæ.*Hippodamia glacialis* Fab.*Hippodamia 13-punctata* Linn.*Hippodamia parenthesis* Say.*Coccinella trifasciata* Linn.*Coccinella 9-notata* Hb.*Coccinella 5-notata* Kirby.*Coccinella tricuspidis* Kirby.

(Sprague.)

Adalia bipunctata Linn.*Psyllobora 20-maculata* Say.*Chilocorus biculnerus* Muls.*Brachyacantha ursina* Fab.*Hyperaspis signata* Oliv.*Hyperaspis bigeminata* Rand.*Hyperaspis undulata* Say.

(All these species of *Hyperaspis* were taken abundantly on the summit of Mt. Mansfield.)

Scymnus lacustris Lec.*Byrrhidæ*.*Cytilus sericeus* Forst.*Byrrhus americanus* Lec.*Parnidæ*.*Helichus striatus* Lec. (Sprague.)*Elmidæ*.*Elmis ovalis* Lec. (Sprague.)*Histeridæ*.*Hister ferdatus* Lec.*Hister punctifer* Payk.*Hister depurator* Say.*Hister curtatus* Lec.*Hister bimaculatus* Linn.

(Sprague.)

Hister sedecimstriatus Say.

(Sprague.)

Hister americanus Payk.*Hister lecontei* Mars. (Sprague.)*Hister coarctatus* Lec. (Sprague.)*Suprinus assimilis* Payk.

(Sprague.)

Plegaderus sayi Mars. (Sprague.)*Lucanidæ*.*Dorcus parallelus* Say. (Sprague.)*Platycerus quercus* Weber.*Scarabæidæ*.*Copris anaglypticus* Say.*Copris minutus* Dr.*Onthophagus hecate* Panz.*Onthophagus* var. *orpheus* Panz.*Onthophagus tuberculifrons* Har.*Onthophagus pennsylvanicus* Har.*Aphodius fossor* Linn.*Aphodius fimetarius* Linn.*Aphodius granarius* Linn.*Aphodius inquinatus* Hb.*Aphodius leopardus* Horn.

(Sprague.)

Dialytes striatulus Say.*Geotrupes semiopacus* Jek.*Trox unistriatus* Beauv.*Hoplia modesta* Hald.*Hoplia trifasciata* Say.*Hoplia mucorea* Germ.*Hoplia equina* Lec.*Dichelonycha elongata* Schön.*Dichelonycha subvittata* Lec.

Serica vespertina Schön.
Serica anthracina Lec.
Macroductylus subspinosus Fab.
Endrosa voltrula Lec. (Sprague.)
Lachnosterna fusca Fröhl.
Lachnosterna fraterna Har.
Aphonus castaneus Mels.
Euryomia indu Linn.
Euryomia fulgida Fab.
Osmoderma scabra Beauv.

Buprestidae.

Chalcophora liberta Germ.
Dicerca diraricata Say.
Buprestis maculicentris Say.
Buprestis fasciata Fabr.
Melanophila longipes Say.
(Sprague.)
Melanophila fulvoguttata Har.
(Sprague.)
Chrysobothris trinervia Kirby.
(Sprague.)

Elateridae.

Deltometopus amœnicornis Say.
(Sprague.)
Dromaeolus striatus Lec.
Fornax orchesides Newm.
(Sprague.)
Nematodesatropos Say. (Sprague.)
Epiphanis cornutus Esch.
(Sprague.)
Adelocera obtecta Say.
Cardiophorus convexulus Lec.
(Sprague.)
Elater nigricollis Hbst.
Elater luteus Say.
Elater discoideus Fab.
Elater vitiosus Lec. (Sprague.)

Elater apicatus Say.
Elater luctuosus Lec. (Sprague.)
Elater hepaticus Mels.
Elater nigrinus Payk. (Sprague.)
Elater protercus Lec. (Sprague.)
Megapenthes rufilabris Germ.
Monocrepidius auritus. (Sprague.)
Agriotes mancus Say.
Dolopius lutealis Esch.
Betarmon bigeminatus Rand.
Melanotus teneicollis Lec.
Melanotus castaneipes Payk.
(Sprague.)
Melanotus fissilis Say. (Sprague.)
Melanotus leonardi Lec.
Melanotus communis Gyll.
Limoniinus ectypus Say. (Sprague.)
Athous cucullatus Say.
Oestodes tenuicollis Rand.
Sericosomus incongruus Lec.
(Sprague.)

Oxygonus obesus Say.
Corymbites tessellatus Linn.
(Sprague.)
Corymbites resplendens Esch.
(Sprague.)
Corymbites vulneratus Lec.
Corymbites triundulatus Rand.
(Sprague.)
Corymbites hamatus Say.
(Sprague.)
Corymbites hieroglyphicus Say.
Corymbites cruciatus Linn.
Corymbites inflatus Say.
Asaphes decoloratus Say.

Dasyllidae.

Eurypogon niger Mels.
Cyphon ruficollis Say.

Lampyridæ.

- Dictyoptera perfaceta* Say.
Calopteron typicum Newm.
Eros crenatus Germ. (Sprague.)
Eros humeralis Fab. (Sprague.)
Eros modestus Say.
Eros mollis Lec. (Sprague.)
Lucidota atra Fab.
Photinus nigricans Say.
(Sprague.)
Photinus decipiens Har.
Photinus scintillans Say.
Photuris pennsylvanica De G.
Phengodes plumosa Oliv.

Telephoridæ.

- Chauliognanthus americanus* Forst.
Very abundant on the flowers of
thistles during August.
Podabrus diadema Fab.
Telephorus carolinus Fab.
Telephorus scitulus Say.
Telephorus fraxini Say. (Sprague)
Telephorus rotundicollis Say.
(Sprague.)
Telephorus bilineatus Say.

Malachidæ.

- Collops tricolor* Say.
Collops 4-maculatus Fab.
Attalus terminalis Er.
Attalus morulus Lec.

Cleridæ.

- Trichodes nuttalli* Kirby.
Clerus thoracicus Oliv. (Sprague.)
Clerus var. *nubilus* Klug.
Hydnocera subaenea Spin.
Hydnocera verticalis Say.

Ptinidæ.

- Trypoxipitys sericeus* Say.
(Sprague.)

Spondyllidæ.

- Parandra brunnea* Fab. Abundant.

Cerambycidæ.

- Orthosoma brunneum* Forst.
Tragosoma harrisii Lec. (Sprague.)
Criocephalus agrestis Kirby. (Sprague.)
Tetropium cinnamopterum Kirby. (Sprague.)
Rhopalopus sanguinicollis Hom. (Sprague.)
Hylotrupes ligneus Fab.
Hylotrupes dimidiatus Kirby.
Elaphidion mucronatum Fab.
Glycobius speciosus Say.
Xylotrechus colonus Fab.
Neocyttus erythrocephalus Fab.
Clytanthus ruricola Oliv.
Encyclops caeruleus Say.
Pachyta monticola Rand. (Sprague.)

- Gastrotus cyanipennis* Say.
Leptura lineola Say.
Strangalia acuminata Oliv.
Tyrocerus relutinus Oliv.
Leptura lineola Say.
Leptura canadensis Fab.
Leptura proxima Say.
Leptura vittata Germ.
Monohammus scutellatus Say.
Leptostylus macula Say.
Liopus cinereus Lec.
Hyperlatys asperus Say.

Graphisurus fasciatus De G.*Saperda lateralis* Fab.*Saperda vestita* Say.*Oberea ruficollis* Fab.*Saperda tridentata* Oliv.*Tetraopes tetraophthalmus* Forst.

(To be continued.)

NOTES ON THE AMERICAN BADGER (*TAXIDEA AMERICANA*).

By Dr. H. A. Hagen.

The following observations were made during the last summer (1882) in Washington Territory east of the Cascade Mountains.

The Badger, to judge from the almost countless holes in the large plains, must be exceedingly common. We saw only one specimen, at sunrise near the mouth of the Yakima River, drinking at a little ditch and disappearing in a slow and sluggish manner. Dr. Turkley wonders that in his long trip he did not see more than two specimens. Badger-holes disappeared almost entirely in the forests.

One can scarcely understand how an animal of this large size can live often so far from the water, as, for instance, in the plains between Umatilla and the Yakima River, where there is no water on either side for seventeen miles. Perhaps they find small springs unknown to the traveller, or burrow in the ground for water. For the same reason they may prefer to make their holes in the road, so as to be near the water running along the roads after a rain. This custom makes fast driving or riding exceedingly dangerous on such plains. The numerous badger-holes, so near together that there are often only two or three feet between them, cannot belong to so many individuals, otherwise the number would be legion. But it is equally difficult to

understand why the same animal makes so many entrances to its abode. Sometimes, and this is more common on the large plains between the Columbia and Yakima Rivers, there are quadrangular places to be found, two yards long and one broad, which suggest that they are a kind of roof to the subterranean abode. They consist of a harder material than their surroundings, as if they were made purposely out of wet loam or clay. The surface of them is hard, smooth, and entirely devoid of any vegetation whatever. Around the border of such places are a number of entrances but none on the places themselves. It is difficult to understand upon what animals the Badger may feed. The nearly related European Badger feeds, at least in part, upon dung-beetles, and near the entrance of the Badger-holes their excrements are found, always containing, to a very large extent, the elytra of dung-beetles. The European Badger never makes its holes perpendicularly for some feet, as is the custom of the American species, therefore the excrements may be found in a certain place inside the subterranean abode. We were assured that the Badger lives by preference upon the Ground Squirrel and that, for this reason, some farmers do not allow the Badgers in their fields to be disturbed. We did not see the Ground Squirrel (*Spermophilus douglassii*), which is said to be as common as obnoxious, and is killed on a large scale with strychnine.

The hunting of the Badger would be profitable; the fur is excellent and durable, and the fat very fine and abundant. It was in former times much used for medical purposes and commanded a high price. The European Badger is said to have an immunity from poisonous snakes, but we could not ascertain if it is the same with the American species.

GENERAL NOTES.

BIRDS AROUND BOSTON DURING THE WINTER OF 1882-3.
—The occurrence of the following birds around Boston during the past winter may be of interest.

Yellow-rumped Warblers (*Dendroica coronata*) have been taken in at least four different localities and a large flock have spent the entire winter in a cedar pasture at Milton.

Both the White-winged (*Loxia leucoptera*) and the Red Crossbills (*Loxia curvirostra americana*) have been comparatively common; the former, I believe, having been more abundant and more generally distributed than it has been for a number of years.

Holböll's Redpoll (*Ægithus linaria holboelli*) has been very common but apparently most so on the sea shore. Out of forty Redpolls shot at Nantasket Beach thirty-six were of this kind (*Forest and Stream*, XX, (1883) p. 124.) Strange to say this species or variety has never been recorded from Massachusetts before, though there are undoubtedly specimens in many collections.

A few White-rumped Red-polls (*Ægithus canescens exilipes*) have also been shot, but this species seems to have been far from common.

Pine Finches (*Chrysometris pinus*) have spent the winter here for I shot them in Milton on January 2, and in Cambridge on February 23.

A small flock of Swamp Sparrows (*Melospiza palustris*) were seen in Belmont and two shot. (*See below.*)

Four Meadow Larks (*Sturnella magna*) spent the entire winter in the Fresh Pond marshes at Cambridge.

A pair of Cow Buntings (*Molothrus pecoris*) were shot

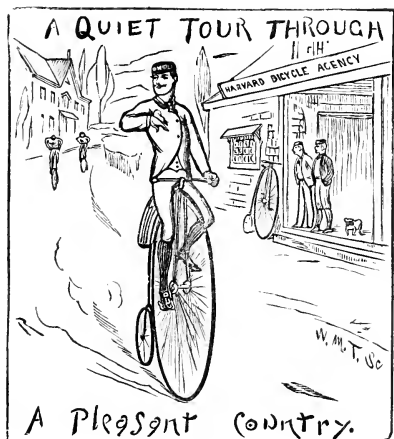
from a flock of Redpolls in Belmont (*See Nuttall Bulletin for April, 1883*).

Robins (*Turdus migratorius*), Cedar Birds (*Ampelis cedrorum*), Purple Finches (*Carpodacus purpureus*), and Night Herons (*Nyctherodius violaceus*) were also seen: and Snow Buntings (*Plectrophanes nivalis*), Redpolls (*Ægiothus linaria*) and Pine Grosbeaks (*Pinicola enucleator*) were unusually plenty. — *Arthur P. Chadbourne, Cambridge, Mass.*

OCCURRENCE OF THE SWAMP AND WHITE-THROATED SPARROWS AT CAMBRIDGE, MASS, IN WINTER.—On January 7, 1882, I shot a White-throated Sparrow (*Zonotrichia albicollis*) in Cambridge, Mass. In the same place I took another on March 7. It therefore seems likely that this species may sometimes spend the entire winter in eastern Massachusetts.

While collecting at Cambridge late in the afternoon of January 11, 1883, I saw a flock of six or seven Swamp Sparrows (*Melospiza palustris*), two of which I shot. I afterward visited the place several times but saw nothing more of them; perhaps because the underbrush where they were had been cut down. I believe that this species has never before been taken in winter as far north as Massachusetts.—*Charles R. Lamb, Cambridge, Mass.*

THE COLORADO POTATO BEETLE PUPATING ABOVE THE GROUND.—In my experiments with the grub of the Colorado Potato Beetle (*Chrysomela 10-lineata* Say.) I have had them go through with all their transformations on the surface of the ground. The pupa state was passed under the leaves in the box and they changed to pupæ without constructing a case or cocoon, as is generally stated. The last change presented a strange appearance; first the head of the larva fell off, or at any rate part of its covering, then the legs, then the remaining portion of the covering, and the pupa was complete.—*N. Coleman, Berlin, Conn.*



Is, after all, the most perfectly delightful of the many enjoyments which only the hardy cyclist can realize. Fortunate, indeed, is he, who, secure in the possession of his sturdy "Harvard," or speedy "Yale," or symmetrical "Shadow," rises with the lark, straps on his "Multum" or his "Takeabout," and leaving the city to its awakening toil and turmoil, glides swiftly out into the purer air and more healthful life beyond. The winding lanes, the sleepy villages, the broad stretches of open country, all develop hitherto unsuspected beauties under the health-giving exercises of the wheel. Are you content with *reading* this, or will you realize it practically? If the latter, be careful in choosing your bicycle, that you are content with nothing less than the very best that money can procure. You may feel assured that it will prove the truest economy in the end. Find out all you can about bicycles before you make your choice, and if you will send us a three-cent stamp, we will aid you in your search for information, by sending you our large illustrated catalogue by return mail.

THE CUNNINGHAM COMPANY,

The Pioneer Bicycle House of America.

[Established 1877.]

Importing Manufacturers of Bicycles & Tricycles,
ODD FELLOWS' HALL, BOSTON, MASS.

C. J. MAYNARD & CO.

PUBLISHERS AND DEALERS IN

BIRDS' SKINS AND EGGS, And Naturalists' Supplies,

(Established in 1864.)

304 WASHINGTON STREET, BOSTON, MASS.

We would especially call attention to our large Stock of Birds' Eggs and Naturalists' Supplies. Send for Catalogue, addressing as above.

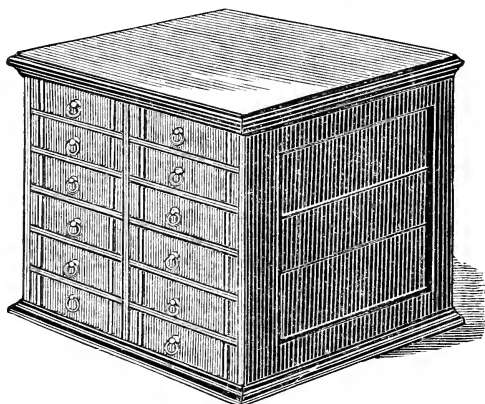
Livermore Stylographic Pen—An Indispensable Instrument.

The value of an article is almost always indicated by its price, and for years the people were content to pay \$3.00 for a genuine Livermore Stylographic Pen, and the same pens are yet doing good service. The success of these pens led unscrupulous persons to get up inferior imitations, which they offered at such low prices that many persons not understanding the difference, were induced to buy them. The Livermore Company, therefore, cut down the price of their short plain pens to \$2.00, and short gold mounted to \$2.50 each, to give everybody a chance to have the best article of the kind. You can buy them for that money by remitting the amount to LOUIS E. DUNLAP, Manager Stylographic Pen Co., 290 Washington Street, Boston; the pen, together with a package of superior ink will be sent by return mail, and the money will be at once refunded if they do not prove to be perfect and satisfactory in every respect. There is nothing more appropriate than a Stylograph as a gift to a lady or gentleman. The Stylographic Pen Co., who manufacture the Livermore Pen, is the largest concern of the kind in the world, with branches at New York, Chicago, and London, Eng. The Livermore Stylographic Pen is a pencil which writes ink, never needs sharpening and never wears out, and has been adopted by over 500,000 knights of the quill in this country and abroad. Any one who has learned to use a Livermore Pen will not be persuaded to do without it, and any one who has not learned to use one should get one at once.

C. W. CLARK,

MANUFACTURER AND DEALER IN

LIBRARY SUPPLIES.



(CARD CATALOGUE CASE.)

Cases, Bristol Cards and Furnishings always on hand.

27 FRANKLIN STREET, BOSTON.

Call and examine Stock.

The Choicest Styles of
FINE POCKET KNIVES,
FANCY KNIVES,
SPORTSMEN'S KNIVES.

TABLE CUTLERY
OF THE BEST MAKERS,
AMERICAN & FOREIGN.

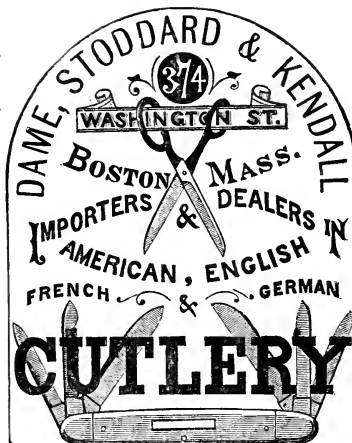
SCISSORS
Elegantly finished of all
forms and sizes.

Cases of
SCISSORS,
SHEARS,
RAZORS.
Dressing Cases,

LADIES' COMPANIONS.

Small Steel Wares.

Travellers' Cases, Luncheon Baskets
Flasks, Telescopes, Pocket Compasses.



Sole Agents for the
United States for

ENGSTRÖM'S
SWEDISH
RAZORS.
The Best in the World.

FOR ACME CLUB
SKATES,
The only Reliable Self-
fastening Skate;

— FOR —
WINSLOW'S SKATES.

DOG-COLLARS,
Of every kind.
MUZZLES AND CHAINS.
POCKET BOOKS,
Fine Leather Goods.

ANGLERS

Will find everything for

FISHING

Of the most Reliable Quality.

ROLLER SKATES.

THE
QUARTERLY JOURNAL
OF THE
BOSTON ZOÖLOGICAL SOCIETY.

Vol. II. — JULY, 1883. — No. 3.

CONTENTS:

PAGE.

NOTES ON <i>COLAPTES AURATUS</i> , CONTAINING SOME THEORIES REGARDING VARIATION OF PLUMAGE. By C. F. Maynard	33
A CATALOGUE OF THE <i>COLEOPTERA</i> OF THE GREEN MOUNTAINS. By R. Hayward and H. Savage	36
THE MAMMALS OF FLORIDA. By C. F. Maynard	38
GENERAL NOTES	43
Occurrence of the Connecticut Warbler (<i>Oporornis agilis</i>) in Massachusetts in Spring;	
Cuban Night Hawk (<i>Chordeiles popetue minor</i>) in Florida.	
ERRATUM	44

BOSTON, MASS.
PUBLISHED BY THE SOCIETY.

THE QUARTERLY JOURNAL
OF THE
BOSTON ZOÖLOGICAL SOCIETY,

A MAGAZINE DEVOTED TO THE STUDY OF AMERICAN ZOÖLOGY,
ESPECIALLY THE VERTEBRATA AND INSECTA.

In order to establish the Journal as a permanent Zoölogical publication, its patrons, it is hoped, will not only renew their own subscriptions, but will also use their influence to extend its circulation. The public in general are also notified that some of the most eminent American authorities in various branches of Zoölogy have promised their support and occasional contributions.

The Journal is the only magazine in the country which, while it does not restrict itself to but one branch of the science, is confined to the general study of American Zoölogy. Hence it appears that if sufficient pecuniary aid be obtained its final success is ensured.

TERMS.

FOR ONE YEAR . . (postage paid) . . 50 CTS. IN ADVANCE.

FOR ONE COPY 15 CTS.

All **Remittances** should be made to

**A. C. ANTHONY, 285 Marlborough Street,
Boston, Mass.,**

And should be sent by Registered Letter or P. O. Order on Boston; otherwise at the risk of the sender.

Communications intended for publication should be received at least one month before the publication of the number in which they are intended to appear.

The editorial supervision is in charge of

Messrs. A. P. Chadbourne and H. Savage,

to whom all articles should be sent.

Advertising Rates.—\$5.00 per page; \$3.00 per half-page; 20 cents per line (*pica*); a discount of 20 per cent for each subsequent insertion.

THE
QUARTERLY JOURNAL
OF THE
BOSTON ZOÖLOGICAL SOCIETY.

Vol. II.

July, 1883.

No. 3.

NOTES ON *COLAPTES AURATUS*, CONTAINING
SOME THEORIES REGARDING VARIATION IN
PLUMAGE.

By C. J. Maynard.

I have throughout the present month (April 1883) been receiving a considerable number of Golden-winged Woodpeckers in the flesh from my collectors at Ann Arbor, Michigan, and that vicinity. Almost all the specimens which have come have been extremely pale; not only is the yellow of the wings and the ground color generally very light in color, but the dark markings above and below are very indistinct. This is the condition of the majority of the specimens, but occasionally I find one that will be as dark as the normal eastern plumage. Among these dark birds I was surprised to find a female with a clearly defined maxillary patch^{*} of red, small to be sure but still clearly marked. Another quite pale female has a partly defined maxillary patch of black, caused by black patches on the central ray of the maxillary feathers. Again a male, dark in color, has the feathers of the black maxillary patch tipped with red. Now I have seen all these stages of plumage, except the first named, among eastern speci-

mens, notably in birds from Pennsylvania, and the reason why it occurred has puzzled me considerably. I have always been inclined to consider that some local climatic condition, approaching that under which the typical *mexicanus* lives, was the cause of it. The peculiar stages of plumage of these Michigan Birds have caused me to think that I may have been wrong in my previous conclusions. It is a well known fact that where two sexes of a species, which are of widely different shade of color, especially among domesticated animals, mate, the offspring are not apt to resemble their parents in any peculiarities, but that they are more likely to exhibit some character which was present among their remote ancestors. Take this into consideration in the case in hand and we have: (1) A pale race of *Colaptes auratus* which is established in Michigan; (2) A dark outsider perchance wanders into this community and mates with the pale bird; (3) This union produces the disturbing element and the offspring receives as the result of this union the stamp of some peculiar ancestral character, which in this case is shown in two ways; first in the red on the black maxillary patch, second in the female assuming a maxillary patch either black or red.

In advancing this hypothesis it will be at once perceived that we are assuming that the original stock of the Golden-winged Woodpecker was typical *mexicanus*, not *auratus*; but in the black and red mustache in the female, I think that we can advance a step beyond this and assume that the original stock was some typical species in which both sexes possessed the black maxillary patch and which often times passed through, so to speak, the *mexicanus* form, breeding out into typical *auratus*.

Assuming the correctness of the hypothesis that any admixture of blood from an outside element into any quite well defined local race, produces a disturbance which is

liable to cause the outcropping of some ancestral character, which has long been lying dormant, we have at once a flood of light let in upon some of our most difficult ornithological problems. It will also tend to show from what direction any given species had its origin. For example, occasionally we have specimens of *Pipilo erythrophthalmus* here in the east with spotted scapularies. I have one now in my collection in which the white marking on the scapularies is very prominent and which was taken in Burlington, Vt., and, upon an examination of a number of Towhees taken in exactly the same locality, I find that they are all unusually dark; in fact a dark local race had been formed, for as is well known, some birds return yearly to breed in the same locality and thus races are formed which become more or less isolated. A pale normal bird had quite likely invaded this territory occupied by the dark race, a disturbance was the result of the union with one of the males of the community, and the offspring was a bird with spotted scapularies, showing, according to our hypothesis, that his ancestors had spotted scapularies like many of the western races, which in turn evidently had their origin from the typical Mexican *maculatus*.

Again we frequently find "Juncos" in Massachusetts during the migrations, having a well defined white band on the wing, a character which might puzzle us to account for even by this hypothesis. Thousands of miles intervene between the present stock or perhaps a phase through which the parent stock has passed, and the *Junco hyemalis* of the east; yet the dominant ancestral peculiarity is there and owing to the disturbance, the Gray Snow Bird, child of parents with unmarked wings, exhibits the white wing-bar of his remote ancestors.

It is also a well known fact that the young of animals often prove ancestral characters which are lost at a more

advanced age; whether resulting from an interchange of blood or not this is surely the case. I have long been aware that the fall nestling Golden-winged Woodpeckers frequently, although not always, show black maxillary patches. The nestling of the Downy Woodpecker (*Picus pubescens*) has the top of the head spotted with red and we must still look to the west for the ancestral stock of this species, *Picus scalaris et nuttalli*. Other examples might be shown but the matter still rests too much upon hypothesis to go on at present. I have only mentioned the matter as it has been suggested to me by my studies, in order that others may look into it. We certainly are too hasty in judging what the original stock of a species may have been; for example how do we know that all "Juncos" are sub-species of *hyemalis*, or at best are described from this species as a permanent stock, as has been too often indicated by name? Priority of naming may have something to do with the matter in this case, yet it is always a varying process. The same is partly true of *Colaptes auratus* and *Colaptes mexicanus*. Let us look more closely then into this guided by all the light which it is possible to bring upon the subject.

A CATALOGUE OF THE *COLEOPTERA* OF THE GREEN MOUNTAINS.

By R. Hayward and H. Savage.

(Continued from page 29.)

<i>Chrysomelidæ.</i>	<i>Lema trilineata</i> Oliv.
<i>Donacia confusa</i> Lec.	<i>Monachus saponatus</i> Fab.
<i>Donacia flavipes</i> Kirby.	(Sprague.)
<i>Syneta ferruginea</i> Germ.	<i>Cryptocephalus venustus</i> Fab.

Cryptocephalus 4-maculatus Say.*Cryptocephalus 4-guttulus*.*Pachybrachys M-nigrum* Mels.

(Sprague.)

Heteraspis marcessita Germ.*Chrysochus auratus* Fab.*Paria* var. *4-notata* Say.*Paria aterrima* Oliv.*Colaspis brunnea* Fab. (Sprague.)*Colaspis* var. *flavida* Say.*Colaspis pretexta* Say.*Colaspis* var. *puncticollis* Say.*Chrysomela clivicollis* Kirby.*Chrysomela 10-lineata* Say.*Chrysomela suturalis* Fab.*Chrysomela elegans* Oliv.*Chrysomela multiguttis* Stal.*Chrysomela bigsbyana* Kirby.*Gastrophysa polygoni* Linn.*Prasocuris varipes* Crotch.*Plagioderia viridis* Mels.

(Sprague.)

Phyllobrotica discoidea Fab.

(Sprague.)

Diabrotica vittata Fab.*Trichabda tomentosa* Linn.*Disonycha alternata* Ill.*Disonycha punctigera* Lec.*Disonycha glabrata* Fab.*Disonycha collaris* Fab.*Systema frontalis* Fab. (Sprague.)*Crepidodera helxines* Linn.*Microrhopala excavata* Say.*Physonota unipunctata* Say.*Coptocyclus clavata* Fab.*Tenebrionidæ.**Nyctobates pennsylvanicus* De G.*Upis ceramboides* Linn.*Centronopus calcaratus* Fab.*Xylopinus superdoides* Oliv.

(Sprague.)

Xylopinus rufipes Say. (Sprague.)*Xylopinus senescens* Lec.*Tenebrio molitor* Linn.*Tenebrio tenebroides* Beauv.*Blapstinus moestus* Mels.*Blapstinus metallicus* Fab.*Paratenetus punctatus* Sol.

(Sprague.)

Paratenetus fuscus Lec.*Phaleria testacea* Say.*Diaperis hydni* Fab.*Platydemus americanum* Lap.*Bolitotherus bifurcus* Fab.*Bolitophagus corticola* Say.*Bolitophagus depressus* Rand.

(Sprague.)

*Alleculidæ.**Isomira quadristriata* Comp.*Mycetochares foveatus* Lec.

(Sprague.)

Androchirus fuscipes Mels.

(Sprague.)

*Pyrochroidæ.**Schizotus cervicalis* Newm.

(Sprague.)

Dendroides canadensis Latr.*Dendroides testacea* Lec.*Anthicidæ.**Notoxus anchora* Hentz.*Anthicus obscurus* Laf. (Sprague.)*Melandryidæ.**Penthe obliquata* Fab. (Sprague.)

<i>Penthe pimelia</i> Fab.	<i>Meloidæ.</i>
<i>Synchroa punctata</i> Newm.	
<i>Melandrya striata</i> Say.	<i>Epicauta cinerea</i> Forst.
<i>Mystaxia simulator</i> Newm.	
<i>Serropalpus striatus</i> Hellen.	<i>Cephaloidæ.</i>
(Sprague.)	
<i>Hypulus liturata</i> Lec. (Sprague.)	<i>Cephalon unguare</i> Lec.
<i>Hypulus concolor</i> Lec. (Sprague.)	(Sprague.)
<i>Mordellidæ.</i>	<i>Ædemeridæ.</i>
<i>Anaspis rufa</i> Say. Very common at altitudes above 3000 feet.	<i>Ditylus cæruleus</i> Rand.
<i>Mordella scutellaris</i> Fab.	<i>Pythidæ.</i>
(Sprague.)	
<i>Mordella marginata</i> Mels.	<i>Priognathus monilicornis</i> Rand.
<i>Mordellistena scapularis</i> Say.	(Sprague.)
(Sprague.)	<i>Salpingus virescens</i> Lec.
<i>Mordellistena cervicalis</i> Lec.	(Sprague.)
(Sprague.)	

THE MAMMALS OF FLORIDA.

By C. J. Maynard.

(Continued from page 24.)

27. *MUS TECTORUM* Savi. White-bellied Rat.—I took my first specimens in a trap set in an old shanty not far from the Cedar Keys. They were not common even here, and I never met with them elsewhere.

This species was probably introduced into the country from the vessels of the early Spanish discoverers. In the old world it inhabits the thatched roofs of houses, from which we may infer that this species originally found its home among thick reeds or grasses, of which the roofing would probably be composed.

28. *HESPEROMYS LEUCOPUS* *Wagner* (= *COGNATUS*, *MYOIDES* et *GOSSYPINUS* of authors). White-footed Mouse.—This Mouse is very abundant throughout all sections of the mainland of Florida, infesting the houses of the smaller settlements after the manner of the common mouse. I have also known this to occur in New England, especially in isolated buildings. I can see no reason why the so-called *gossypinus* should be separated from *leucopus*, as I can find no constant character which would entitle it to a specific rank.

29. *HESPEROMYS AUREOLUS* *Wagner*. Golden Mouse.—I obtained two specimens of this beautiful little mouse near Dummett's. Both of them were captured in a house where the common species (*leucopus*) was also abundant. This was in the spring of 1869, but since that time I have never been able to find another, and the people who brought the specimens informed me that they were quite rare.

30. *HESPEROMYS PALUSTRIS* *Wag.* Swamp Mouse.—The first instance of my finding this species in Florida was at Miami. There was an old cistern here which was formerly used by the troops which were stationed at old Fort Dallas. It was about ten feet deep, having cemented sides, and contained nearly two feet of water. Several species of the smaller rodents were frequently found dead and floating on the surface, having evidently fallen in while attempting to reach the water. Among them was a specimen of the Swamp Rat. As this was the only instance of my taking it in the southern section of the state I am unable to give any account of its habits there. But I found it in immense numbers at Salt Lake, inhabiting the moist prairies. Here they build nests near the tops of the grass, somewhat after the manner that the White-footed Mouse builds in bushes at the North.

31. *NEOTOMA FLORIDANA* Say and Ord. Wood Rat.— I saw nests of this species quite often about Jacksonville and Hibernia, but found none at Blue Springs or at any section south of this point. But Professor Baird, in his "Mammals of North America," cites a specimen which was taken on Indian River by Dr. Wurdemann. Now very rare in Florida, but I had a specimen sent me from Dunn's Lake.

32. *SIGMODON HISPIDUS* Say and Ord. Cotton Rat.— Common throughout the entire mainland of Florida, and appears to frequent the marshy places along the borders of rivers and other bodies of water. Whenever we encamped in such localities the Cotton Rats would gather around to feed upon remnants of scattered food. It appears to be nocturnal in its habits.

33. *ARVICOLA PINETORUM* LeConte. Pine Mouse.— I insert this species on the authority of Aububon and Bachman, who assert that they have received it from Florida.

34. *LEPUS SYLVATICUS* Bachman. Gray Rabbit.— Abundant throughout all sections of the mainland, frequenting the pine woods as well as the hummocks. They appear to have much the same habits as at the North.

35. *LEPUS PALUSTRIS* Bachman. Marsh Rabbit.— Common in the marshes of the St. John's River, in the marshes of the Cedar Keys and southward.

36. *DIDELPHYS VIRGINIANA* Shaw. Opossum.— Common throughout the mainland of the state, but does not occur on the Keys. These animals are a decided pest to the inhabitants, for they are prone to rob hen roosts. They are strictly nocturnal, remaining concealed in the trees during the day.

I have never met with an undomesticated animal so variable in color. Three specimens now before me exhibit the extremes. One, evidently an old individual, is gray

throughout, inclining more to white, with no decided black markings, excepting the ears, legs and feet. The latter are *black to the nails* on some of the toes, while the other claws have a few white hairs at their bases. The tail is entirely white. Another, younger, has dirty white fur with black tip. Numerous long white hairs appear over the entire upper surface of the body, giving the animal a singular appearance. The hind legs and feet are black, as in the other specimens, to the nails, excepting a few white hairs at their bases. The front legs and feet are black nearly to the claws. The ears are tipped with white, while the tail is black for the basal third, the remainder white. Another young specimen has the base of the fur white, but with the tips so decidedly dark that it nearly conceals the former color, and no one would hesitate to call it a black opossum. Yet its toes are white, there are white markings about the head, and a stripe on the belly is white, with a yellow suffusion between the fore legs. Only one-fourth of the basal portion of the tail is black.

APPENDIX.

Mammals which were Formerly found in Florida.

According to Bartram the Beaver (*Castor canadensis*) was formerly found in the state. He makes mention of it in his travels in Florida, published in 1791.

The historians of De Soto's travels speak of herds of Wild Cattle being found in Florida. They probably allude to the Buffalo (*Bos Americanus*), but as Florida then occupied a very extensive range of country, embracing Alabama Georgia and Mississippi, it is extremely probable that this species did not occur within the limits of the present state.

The last mentioned authors and other early writers also

speak of a Wild Dog as inhabiting Florida. They cannot mean the Wolf or the Fox, for these are included in their lists of the animals of the then new country. It is possible that the singular species of dog now used by the Seminoles of Florida was once wild.

Domesticated Species found in a Wild State.

There are hundreds of cattle in Florida which are now perfectly wild and have been in this condition since the first Indian war, at which time they escaped from their owners. They generally inhabit what is termed the "Turnbull Swamp," a wide expanse of waste land which lies about the head of Indian River. But I have seen them in the interior, near the head waters of the St. John's River. They are rapidly becoming exterminated, however, as the settlers consider them common property and shoot them whenever they can.

Hogs are also found wild in some sections, but not in any great numbers. The usually black color of the domestic hogs of Florida has been noticed by Darwin in his fifth edition of "Origin of Species" (p. 26) on the authority of Professor Wyman. He says that the light-colored hogs contract a disease from eating the Paint-root (*Lachnanthes tinctoria*) which causes their hoofs to drop off, whereas black ones are not affected by it. I have carefully inquired into this matter and have not only observed for myself, but conversed with many intelligent men upon the subject. I find that a slight error has been made in the statement. The color of the hair or bristles has nothing to do with the health of the animal, but its *hoofs* must be black in order that it may eat the paint root with impunity. I have seen black pigs having white feet lame from this cause, and this

is the usual opinion of all the big raisers with whom I conversed. Yet this does not materially affect Mr. Darwin's argument, which is that the mere existence of a certain plant causes the hogs of this section to assume a dark color, for if the hoofs are dark the whole animal is usually dark. That the case may be made seemingly stronger I will say, that in some sections of Florida, where the paint root does not grow, white hogs are as numerous as black ones.

I find that there is another reason why the settlers select hogs which are of a dark color. This is that they stand a better chance of escaping from bears than white ones, as they are less conspicuous, especially in the night. Now I can go a step farther and show that the hogs of themselves assume a protective color. It is noticeable that hogs which have lived for generations in the piny woods are of a reddish hue, corresponding exactly with the color of the fallen pine leaves, so that it is almost impossible to detect one at a little distance when it is lying upon a bed formed of them.

This instance, together with the fact that the black hoof is a safeguard against the poisonous effects of the paint root, seems a conclusive argument in favor of the theory that the Florida hogs have made a slight advance towards forming a new variety or species.

(To be Continued.)

GENERAL NOTES.

OCCURRENCE OF THE CONNECTICUT WARBLER (*Oporornis agilis*) IN MASSACHUSETTS IN SPRING.—A specimen of this Warbler was taken by Mr. Dwight Blaney at Readville, Mass., May 24, 1883. This is the first record of the occur-

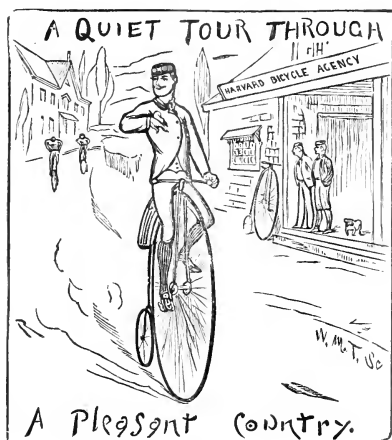
rence of this species in spring in our state and the third, I think, for the Atlantic slope. The species is not uncommon, during the spring migration in Illinois and other northern states, but is extremely rare in the east; on the other hand it is quite common in eastern Massachusetts in early September. The breeding grounds of this warbler are unknown.—*C. J. Maynard, Boston, Mass.*

CUBAN NIGHT HAWK (*Chordeiles popetue minor*) IN FLORIDA.—I have recently received from one of my Florida collectors, some six or eight specimens of a small Night Hawk, taken in the vicinity of Clear Water Harbor early in April. I refer these birds, which are certainly much smaller than any I have hitherto seen from Florida, to *minor*, although none of the specimens are as rufous as I should expect to see.

Mr. Green Smith obtained this sub-species at Tampa some years ago, and Mr. Ridgway credits me with obtaining a specimen at Miami, but I think this latter record is an error. (See Descriptions of Birds New to North American Fauna, by C. J. Maynard, under head of *Chordeiles minor*, for notes on this subject.) The birds obtained were breeding and the eggs have since then been obtained. Dimensions of specimens, wing, 7.25; tail, 3.60.—*C. J. Maynard, Boston, Mass.*

ERRATUM.

Vol. II, page 32, *Nyctherodius violaceus* should read *Nyctea grisea nœvia*.



Is, after all, the most perfectly delightful of the many enjoyments which only the hardy 'cyclist' can realize. Fortunate, indeed, is he, who, secure in the possession of his sturdy "Harvard" or speedy "Yale," or symmetrical "Shadow," rises with the lark, straps on his "multum" or his "Takeabout," and leaving the city to its awakening toil and turmoil, glides swiftly out into the purer air and more healthful life beyond. The winding lanes, the sleepy villages, the broad stretches of open country, all develop hitherto unsuspected beauties under the health-giving exercise of the wheel. Are you content with *reading* this, or will you realize it practically? If the latter, be careful in choosing your bicycle that you are content with nothing less than the very best that money can procure. You may feel assured that it will prove the truest economy in the end. Find out all you can about bicycles before you make your choice, and if you will send us a three cent stamp, we will aid you in your search for information by sending you our large illustrated catalogue by return mail.

THE CUNNINGHAM COMPANY,

The Pioneer Bicycle House of America.

[Established 1877.]

Importing Manufacturers of Bicycles and Tricycles . . . ODD FELLOWS HALL, BOSTON, MASS.

HELIOTYPE.

PERMANENT PHOTOGRAPHIC BOOK ILLUSTRATIONS.

The Heliotype Printing Company

ARE PRODUCERS OF ILLUSTRATIONS BY THE

Most approved Photo-Mechanical, Photo-Lithographic and Photo-Engraving Processes.

Employed by the United States Government in illustrating Scientific and Medical reports by Scientific, Historical, and other learned Societies; by the leading Publishers, and for illustrating Town and Family Histories, Trade Catalogues, Show Cards, etc.

Facsimiles of Medals and Coins, Ancient Manuscripts, Paintings, Drawings, Sketches and Autograph Circulars, Views, and Portraits from Nature, Medical and Scientific Objects, Antiquities, etc.

Special attention paid to the reproduction of Architects', Engineers', and Surveyors' Drawings.

Estimates and Specimens furnished on application.

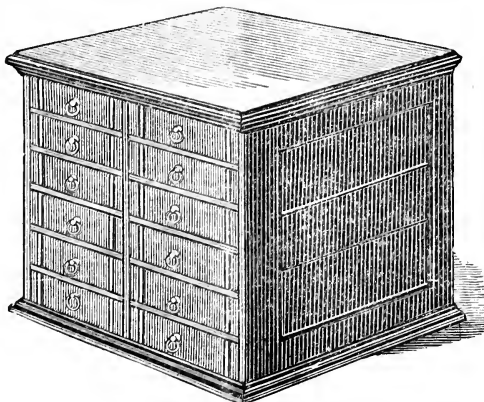
THE HELIOTYPE PRINTING COMPANY,
211 Tremont Street, Boston.

NEAR BOYLSTON STREET.

C. W. CLARK,

MANUFACTURER AND DEALER IN

LIBRARY SUPPLIES.



(CARD CATALOGUE CASE.)

Cases, Bristol Cards, and Furnishings always on hand.
27 FRANKLIN STREET, BOSTON.

Call and examine stock.

C. J. MAYNARD & CO.

PUBLISHERS AND DEALERS IN

**BIRDS' SKINS AND EGGS,
And Naturalists' Supplies,**

(Established in 1834.)

304 WASHINGTON STREET, BOSTON, MASS.

We would especially call attention to our large Stock of Birds' Eggs and Naturalists' Supplies. Send for Catalogue, addressing as above.

Livernore Stylographic Pen—An Indispensable Instrument.

The value of an article is almost always indicated by its price, and for years the people were content to pay \$3.00 for a genuine Livernore Stylographic Pen, and the same pens are yet doing good service. The success of these pens led unscrupulous persons to get up inferior imitations, which they offered at such low prices that many persons not understanding the difference, were induced to buy them. The Livernore Company, therefore, cut down the price of their short plain pens to \$2.00, and short gold mounted to \$2.50 each, to give everybody a chance to have the best article of the kind. You can buy them for that money by remitting the amount to LOUIS E. DUNLAP, Manager Stylographic Pen Co., 290 Washington Street, Boston; the pen, together with a package of superior ink will be sent by return mail, and the money will be at once refunded if they do not prove to be perfect and satisfactory in every respect. There is nothing more appropriate than a Stylograph as a gift to a lady or gentleman. The Stylographic Pen Co., who manufacture the Livernore Pen, is the largest concern of the kind in the world, with branches at New York, Chicago, and London, Eng. The Livernore Stylographic Pen is a pencil which writes ink, never needs sharpening and never wears out, and has been adopted by over 500,000 knights of the quill in this country and abroad. Any one who has learned to use a Livernore Pen will not be persuaded to do without it, and any one who has not learned to use one should get one at once.

H. Maynard

THE
QUARTERLY JOURNAL
OF THE
BOSTON ZOÖLOGICAL SOCIETY.

Vol. II. — OCTOBER, 1883. — No. 4.

CONTENTS:

	PAGE.
DESCRIPTION OF THREE NEW SPECIES OF BIRDS FROM SANTO DOMINGO. By <i>Charles B. Cory</i>	45
ORNITHOLOGICAL NOTES FROM MINNESOTA. By <i>Foster H.</i> <i>Brckett</i>	47
THE MAMMALS OF FLORIDA. By <i>C. J. Maynard</i>	49
NOTES ON NEW BRUNSWICK BIRDS. By <i>Arthur P. Chadbourne</i>	50
NOTES ON THE DIFFERENCES BETWEEN CORY'S SHEAR- WATER, <i>PUFFINUS BOREALIS</i> , AND THE GREATER SHEARWATER, <i>PUFFINUS MAJOR</i> . By <i>C. J. Maynard</i>	53
GENERAL NOTES	55
<i>Dendræca palmarum palmarum</i> at Belmont, Mass; The White Heron (<i>Ilerodias egretta</i>) at Quincy, Mass; Rare <i>Lepidoptera</i> around Boston during the Past Summer; A Note on <i>Acmaodera culta</i> .	
INDEX TO VOLUME II.	57

BOSTON, MASS.
PUBLISHED BY THE SOCIETY.
Entered at the Boston P. O. as second-class mail matter.

THE QUARTERLY JOURNAL
OF THE
BOSTON ZOÖLOGICAL SOCIETY,

A MAGAZINE DEVOTED TO THE STUDY OF AMERICAN ZOÖLOGY,
ESPECIALLY THE VERTEBRATA AND INSECTA.

In order to establish the Journal as a permanent Zoölogical publication, its patrons, it is hoped, will not only renew their own subscriptions, but will also use their influence to extend its circulation. The public in general are also notified that some of the most eminent American authorities in various branches of Zoölogy have promised their support and occasional contributions.

The Journal is the only magazine in the country which, while it does not restrict itself to but one branch of the science, is confined to the general study of American Zoölogy. Hence it appears that if sufficient pecuniary aid be obtained its final success is ensured.

TERMS.

FOR ONE YEAR . . (postage paid) . . 50 CTS. IN ADVANCE.

FOR ONE COPY 15 CTS.

**Vol. III will be increased in size and the price raised
to \$1.00 per annum, 25 cents per copy.**

All **Remittances** should be made to

**A. C. ANTHONY, 285 Marlborough Street,
Boston, Mass.,**

And should be sent by Registered Letter or P. O. Order on Boston; otherwise at the risk of the sender.

Communications intended for publication should be received at least one month before the publication of the number in which they are intended to appear.

The editorial supervision is in charge of

Messrs. A. P. Chadbourne and H. Savage,

to whom all articles should be sent.

Advertising Rates.—\$5.00 per page; \$3.00 per half-page; 20 cents per line (*pica*); a discount of 20 per cent for each subsequent insertion.

THE
QUARTERLY JOURNAL
OF THE
BOSTON ZOÖLOGICAL SOCIETY.

Vol. II.

October, 1883.

No. 4.

DESCRIPTIONS OF THREE NEW SPECIES OF
BIRDS FROM SANTO DOMINGO.

By Charles B. Cory.

Phœnicophilus frugivorus.

Male: Top of the head brown; shading into ashy on the neck, back of the eye; rest of the upper parts, including back and upper surface of wings and tail brownish-olive; throat white; breast white, becoming ashy upon the side; flanks brownish-olive, the olive mixing with white upon the crissum; primaries and secondaries olive-brown, the inner web, edged with very pale brown; a patch of bright yellow under the base of the wing, extending upon the carpus; eye encircled by a very narrow line of bright yellow, and a spot of yellow in front of the eye at the base of the mandible; upper mandible dark brown; lower mandible yellowish-brown darkest at the base.

Length, 8; wing, 3.50; tail, 3.50; tarsus, 1; bill, .70.

The female is somewhat smaller, but otherwise resembles the male.

I have placed the present species in the genus *Phœnicophilus*, provisionally, as there are several points of difference which are sufficient, in my opinion, to constitute a new genus.

Rupornis ridgwayi.

Female : Top of the head and neck brownish-ash, becoming darker on the back ; the feathers of the back and tertiaries edged with rufous ; under parts dark rufous, the feathers narrowly banded with white ; thighs showing the rufous much brighter, the feathers banded with very fine pale lines ; crissum white, with rufous bands near the tips ; upper part of breast slaty, shading into dull white on the throat ; the shafts of the feathers on the throat and breast dark brown, showing in hair-like lines ; wings and tail dark brown, imperfectly banded with white ; the tail tipped and banded with white, and showing various shadings of dull rufous ; all the primaries imperfectly banded with white, gradually becoming fainter on the outer webs until just perceptible on the sixth ; the rest of primaries and secondaries having the outer web dark brown and the inner webs thickly banded with white, showing traces of rufous.

Length, 14.50 ; wing, 10 ; tail, 6.50 ; tarsus, 2.75 ; bill, 1.25.

Since the foregoing description was written, I have received two males from the same locality ; the general plumage is similar to the female, with the exception that there is much less rufous on the under parts, which have a much more slaty cast ; the thighs show the rufous somewhat brighter ; and the bird is somewhat smaller.

Length, 13.75 ; wing, 9 ; tail, 6 ; tarsus, 2.75 ; bill, 1.20.

Ædicnemus dominicensis.

Male : Top of the head, back, wing-coverts, and tail, brown ; feathers with very pale edging giving a mottled appearance to the back ; the tail feathers showing a band of dull white, succeeded by a broad black tip ; breast slaty, becoming dull white on the throat ; abdomen white, tinged with very pale rufous ; a line of black passing from the top of the eye along the sides of the head to the neck ; under surface of wings white, becoming dark brown at the tips ; the shafts of the feathers on the breast and throat dark brown, showing numerous hair-like lines on the surface of the plumage ; legs and feet greenish-yellow ; upper mandible black, under mandible, base green, shading into black at the tip ; iris yellow.

Length, 14.50 ; wing, 8.50 ; tail, 3.75 ; tarsus, 3.75 ; bill, 1.50.

ORNITHOLOGICAL NOTES FROM MINNESOTA.

By Foster H. Brackett.

During a visit to the northwestern part of Minnesota in May last I found time to take a few notes on the birds of that region, which may be of interest. My stopping place was Detroit City, a small town on the Northern Pacific Railroad about two hundred and fifty miles northwest of St. Paul and forty miles east of the Dakota boundary. I also visited the town of Lakeview, adjoining Detroit on the south.

The general feature of the country to the north of Detroit is a gently rolling prairie with an occasional lake or small stream upon whose banks are found scattered clumps of trees.

South of Detroit, about a mile from the town, is Detroit Lake, about four miles in length, connected by the Pelican River with numerous other bodies of water which finally flow into the Red River of the North.

A belt of woodland about forty miles in width crosses the state from east to west and its northern edge touches the town of Detroit and includes that of Lakeview. In some places the woods are thick and full of underbrush, while in others they give place to small patches of brush-prairie, and as there are quantities of lakes, streams and sloughs, they afford a favorite resort for all kinds of birds.

The woods consist principally of elms, ironwood, maple, oak and hickory, with some white birches and poplars, and a few tamarack swamps.

Some of the lakes are very deep and clear, with sand or gravel beaches and the woods extending to the edge, while

others are shallow and are surrounded by a dense growth of grass and rushes, which makes a favorite breeding-place for Ducks and other birds.

The following notes were taken from May 6 to May 31, 1883, and the birds were all observed or heard by myself. There are a number of other species which I heard of as occurring there, but unless I am sure of it from personal observation I have omitted them from this list.

The spring was backward this year and when I left on May 31 the leaves had not made their appearance on the trees. The ice had left the lakes only about a week before my arrival, and I found several patches of snow in the woods as late as May 15.

The weather was cool and clear and there were only two really warm days, May 15 and 16, when the mercury reached 76° and 78° in the shade. On May 31 it was 32° in the morning. This cool weather kept back some of the winter birds and it seemed strange to see both summer and winter birds moving about together.

My time for collecting was more limited than I could have desired and on that account, no doubt, many birds were there which I did not observe. I found this especially so with regard to the Warblers. From May 18 to May 22 the woods were filled with hundreds of these birds, but as I had but a short time each day to collect, doubtless many species escaped my notice.

1. *TURDUS MIGRATORIUS*. Robin. By no means common. I saw less than a dozen during my whole stay.

2. *TURDUS MUSTELINUS*. Wood Thrush. Heard a few singing, but saw none.

3. *TURDUS FUSCESCENS*. Wilson's Thrush. Common.

4. *TURDUS UNALASCÆ PALLASI*. Hermit Thrush. Common.

5. *TURDUS USTULATUS SWAINSONI*. Olive-backed Thrush. Common for three or four days during the migration.

6. *TURDUS USTULATUS ALICE*. Alice's Thrush. Found in company with the preceding, but not quite as abundant.

7. *MIMUS CAROLINENSIS*. Cat-bird. Common. Especially abundant in the bush prairies.

8. *HARPORHYNCHUS RUFUS*. Brown Thrush. Quite common.

9. *SIALIA SIALIS*. Blue-bird. Saw about half a dozen pairs in all.

(*To be Continued.*)

THE MAMMALS OF FLORIDA.

By C. J. Maynard.

(*Continued from page 24.*)

But I look upon it in another way, and see in these instances but illustrations of a law in nature which grants to nearly all animals the power of assuming protective colors, under certain circumstances, but in a limited degree. This is to be seen in many cases among animals, the most familiar of which is that of the Northern Hare (*Lepus americanus*), which in autumn puts off its brown summer dress and takes on one of the color of the snow, among which it has to live throughout the winter. The hogs of Florida return to the mixed colors in sections where the paint root does not grow and where no pains are taken to select black ones, or where their food and surroundings are varied. There are apparently few or no analogous instances to the black hoofs being a protection against poison, yet I will venture to say that did we understand the entire economy of nature, we should find many similar ones.

The specific and individual variation in color, form, etc., among all animals especially among birds, and caused by climatic conditions, food and surroundings, may be likened to the swaying of the pendulum of a clock which oscillates right and left in a limited space but never passes a certain point. We are inclined to look upon these extreme oscillations as incipient species, not considering that they are simple offshoots which have merely received the extreme oscillation and have remained as they are for ages. As proof of this we have only to observe how often characters, which are common to birds in certain sections, appear in widely distant localities. For example *Colaptes auratus* in the Alleghany Mountains often shows red feathers in the black maxillary patch, while *Pipilo erythrophthalmus*, in the same locality, has spotted scapularies.*

NOTES ON NEW BRUNSWICK BIRDS.

By Arthur P. Chadbourne.

The following notes may prove of interest in connection with the List of "New Brunswick Birds" by Montague Chamberlain (Bull. New Brunswick Nat. Hist. Soc. No 1, 1882).

From July 4, 1883 to July 16 was spent at Hampton (King's County) and from that date until September 1 at Rothesay (King's County), only about twelve miles distant. Yet there were some marked differences in the birds occurring in the two places. Hampton is just within or rather on the belt of "higher and more constant tempera-

* See this Journal, Vol. II. (July, 1883) p. 33.

ture" mentioned by Mr. Chamberlain; while Rothesay is much more subject to "the fog and continuous humid atmosphere of the coast." The country about Hampton is high and rocky, except along the river, where there are extensive marshes; while at Rothesay there are no marshes and the country is lower and less hilly. In neither place is there any "old growth" to speak of and the woods are almost all second growth or scrub.

The Hudson's Bay Chickadee (*Parus hudsonius*) is a common bird at both Hampton and Rothesay, though perhaps more so in the latter locality. In the spruce woods and clearings this species is as plenty as the common Chickadee (*Parus atricapillus*), and often associates with it. On July 13 I found a nest with seven fresh eggs in a clearing in mixed woods. The nest was in a *natural* hole in a decayed stump about two feet above the ground, and was about eighteen inches deep by three in diameter. The hole had apparently not been enlarged by the birds, but was of the same size throughout and entirely open at the top. I found another nest on August 14 in a similar location, except that the stump was about five feet high and the hole at least three feet deep. The nest contained young birds just out of the egg.

Both the Red (*Loxia curvirostra americana*) and White-winged Crossbills (*Loxia leucoptera*) spent the entire summer, though the latter were rare, but were said to be more plenty farther inland, at Clarendon Station, Mispec, etc. The Red Crossbills were very common both at Rothesay and Hampton, and occurred, either in pairs or small flocks, in almost every clump of evergreens. During the last week in July they were seen two or three times with sticks in their bills and also a pair in the act of copulation.

On July 25 I shot a Cape May Warbler (*Perissoglossa*

tigrina) and a Black-throated Blue Warbler (*Dendroica caerulescens*) in the same place on August 16. Also a Blackburnian Warbler (*Dendroica blackburniae*) at Hampton on July 14. I think that the Bay-breasted Warbler (*Dendroica castanea*) cannot be considered very rare as I shot one at Hampton and thirteen at Rothesay. I also shot a pair of Blue Yellow-backed Warblers (*Parula americana*) at Hampton, which evidently had a nest in the neighborhood, and a male at Rothesay. At Hampton I saw a pair of Chestnut-sided Warblers (*Dendroica pennsylvanica*) and also shot a young bird at Rothesay.*

The Swamp Sparrow (*Melospiza palustris*) is very common resident in suitable localities both at Rothesay and Hampton; indeed in these places it seemed nearly as common as in Massachusetts.

Least Flycatchers (*Empidonax minimus*) were not uncommon in the village of Hampton, and, allowing for seeing the same bird frequently, there must have been at least twenty or twenty-five about.

Pine Finches (*Chrysomitris pinus*) were abundant in all the gardens and streets of Hampton, but I saw none at Rothesay. There were young birds just fledged with them on July 16.

Wilson's Thrushes (*Turdus fuscescens*), Cat-birds (*Mimus carolinensis*), Black-billed Cuckoos (*Coccyzus erythrophthalmus*), and Tennessee Warblers (*Helminthophaga peregrina*), occurred at Hampton, but none were seen at Rothesay.

The fall migration began about August 22; after that date Red-bellied Nuthatches (*Sitta canadensis*), Winter Wrens (*Anothura hyemalis*), and Golden-crowned Kinglets (*Regulus satrapus*) were very common, though rare or absent until then.

* The above Warblers are cited as rare by Mr. Chamberlain.

The birds seem to breed very late here. Some young Robins (*Turdus migratorius*) left the nest on August 23. and the last of a nest full of Hermit Thrushes (*Turdus pallasi*) was hatched on the same day.

NOTES ON THE DIFFERENCES BETWEEN CORY'S
SHEARWATER, *PUFFINUS BOREALIS*, AND
THE GREATER SHEARWATER. *PUFFINUS*
MAJOR.

By C. J. Maynard.

Having recently had an opportunity of examining specimens of Cory's Shearwater described as *Puffinus borealis*, by Mr. C. B. Cory (Bull. Nutt. Orn. Club, Vol. VI, April, 1881, p. 84), and of comparing them with the Greater Shearwater (*Puffinus major*), I offer the following notes as a result of these studies.

The bill of *P. borealis* is almost entirely yellow, being dusky only in a band across both mandibles and on the top of the upper, whereas that of *P. major* is nearly or wholly bluish. The size of the bill of *borealis* is much larger, exceeding 2 inches in length and .80 in depth at the nostrils, that of *major* being seldom if ever as much as 2 inches long and only about .50 in depth.

The size of *borealis* is larger; the wing equalling or exceeding 14 inches in length, while in *major* it seldom if ever exceeds 13.50 and is usually shorter. The feet of the two species are about the same size, but those of *borealis* are decidedly lighter in color.

In general coloration *borealis* is much more ashy above, especially anteriorly; the feathers of the head and upper

part of the back being so light as to present quite a strong contrast with the wings. In perfectly adult specimens of *major* the lower neck behind and upper back are nearly as ashy as in *borealis*, but lower down on the back this color is confined to the edges of the feathers, producing a scaly appearance in marked contrast with the dark brown of the central portion of each feather.

The under parts of *borealis*, even the under wing and tail coverts and axillaries, excepting a slight ashy tinge on the sides of the former and on the shafts of the feathers of the latter, are pure sultry white, whereas *major* is marked with dusky in a central line along the abdomen, on the central portions of the under tail coverts, in spots on the axillaries, on the under wing coverts and along the sides especially anteriorly. One of the most noticeable differences, however, between the two species may be seen in the ashy markings of the sides of the head and neck. This in *borealis* extends down on the lower jaw for some distance, thence in a nearly straight line to a point just back of where the bend of the wing touches the body. There is no distinct line of demarkation between the ashy and white, but they gradually shade together. In *major* the dark color of the upper part of the head does not encroach upon the lower jaw but ends in an abrupt line about .40 of an inch below the eye. From thence it extends backward in a straight line to the back of the head beyond which the white of the lower part of the neck encroaches in triangular patches on either side. These patches nearly meet behind the neck in young birds, but in adult specimens this dusky area between is wider. The dark line of demarkation beyond this triangular patch down to the sides is not as well defined as above, but still does not intergrade with the white as completely as in *borealis*. The

patch in front of the eye and around it is decidedly dusky, in quite strong contrast with the ashy of the sides of the head.

In passing I will remark that *borealis* resembles *P. kuhlii* more than any species that I have seen, but is paler. Our knowledge of these interesting birds as a group is at present much too slight, and all notes on them will prove acceptable.

I am indebted to Mr. Herbert K. Job (who has been fortunate enough to procure three specimens of Cory's Shearwater during the past August off the coast near Chatham, Mass.) for the privilege of examining specimens of both *borealis* and *major*. The officers of the Boston Society of Natural History have also permitted me to examine specimens in their museum.

GENERAL NOTES.

DENDRÆCA PALMARUM PALMARUM IN BELMONT, MASS.—On September 29, 1883, I secured two specimens of the Western Yellow Red-poll (*Dendræca palmarum palmarum*), in Belmont, Mass.

They were with another of the same variety, in a small flock of Black-poll Warblers (*Dendræca striata*).

These are the fourth and fifth recorded instances of the capture of this western variety in the state, although it probably occurs more often than is generally supposed. Mr. William Brewster of Cambridge kindly identified the birds for me.—*C. R. Lamb, Cambridge, Mass.*

OCCURRENCE OF THE WHITE HERON (*Herodias egretta*) AT QUINCY, MASS.—Last August while shooting at Quincy, Mass. Mr. E. F. Hyde secured a specimen of the White Heron (*Herodias egretta*) from a flock of about eight. As

this species is of rare occurrence in this state, having been recorded from here but a few times, the above note may be of interest.—*C. J. Maynard, Boston, Mass.*

RARE LEPIDOPTERA AROUND BOSTON DURING THE PAST SUMMER.—I have to record the unusual abundance during the past summer of two rare Lepidoptera, *Papilio cresphontes* and *Euptoieta claudia*. Several specimens of the former were taken at Sharon by Mr. Foster H. Brackett, and Mr. George Dimmock informs me that he took a specimen at Cambridge in August last. I learn also from Mr. Scudder that a specimen was taken last summer at Worcester, Mass.

Five specimens of *Euptoieta claudia* were collected at Newburyport, Mass., during the past summer by Mr. W. H. Swasey, and I have heard of its having been taken by others. It seems indeed strange that butterflies usually so rare in this state should have appeared last summer in tolerable abundance. A note appeared in this Journal (Vol. I, No. 4, p. 33) not long ago recording *Papilio cresphontes* as abundant at Berlin, Conn., and now we have it by no means rare in the vicinity of Boston. We may indeed ask the question is the species moving northward?—*R. Hayward, Cambridge, Mass.*

A NOTE ON *ACMÆODERA CULTA*.—Last May, while collecting at Milton, I found *Acmaeodera culta* in exceedingly large numbers upon the flowers of the common yellow star-grass (*Hypoxys erecta*). The locality was a rather high wood path surrounded on all sides by scrub oak. I have never before taken this species in anything like such numbers.—*R. Hayward, Cambridge, Mass.*

INDEX TO VOLUME II.

[Names of new species are followed by that of the author.]

A.

Acmæodera culta, 56.
Ægiothus canescens exilipes, 31.
 linaria, 32.
 linaria holboëlli, 31.
Agelæus phœniceus, 9.
Alleculidæ, 37.
Ampelis cedrorum, 32.
Anorthura hyemalis, 52.
Antrostomus vociferus, 10.
Artibeus perspicillatus, 22.
Arvicola pinetorum, 40.
Astragalinus tristis, 8.

B.

Badger, American, 29.
 European, 30.
 Bat, Big-eared, 21.
 Carolina, 21.
 Georgia, 21.
 Red, 20.
 Tailless leaf-nosed, 22.
 Bear, Black, 17.
 Beaver, 41.
Blarina brevicauda, 22.
 talpoides, 22.
 Blue-bird.
Bonasa umbellus, 11.
Bos americanus, 41.
 Buffalo, 41.
 Bunting, Cow, 31.
 Snow, 32.
Buprestidæ, 27.
Buteo borealis, 11.
Byrrhidæ, 26.

C.

Canis lupus, 4.
Carabidæ, 13.
Cariacus virginianus, 18.
Carpodacus purpureus, 32.
Castor canadensis, 31.
 Cat-bird, 49, 53.
 Cedar-bird, 32.

Cephaloidæ, 38.
Cerambycidæ, 28.
Ceryle alcyon, 10.
Chætura pelagica, 10.
 Chickadee, Common, 51.
 Hudson's Bay, 51.
Chordeiles popetue, 10.
 popetue minor, 44.
Chrysomela 10-lineata, 32.
Chrysomelidæ, 36.
Chrysometris pinus, 31, 52.
Cicindelidæ, 12.
Cleridæ, 28.
Coccinellidæ, 26.
Coccygus, 10.
 erythrophthalmus, 52.
Colaptes auratus, 11, 33, 50.
 mexicanus, 34.
 Colorado Potato-beetle, 32.
Colydiidæ, 25.
Contopus virens, 9.
Corvus americanus, 6.
Corynorhinus macrotis, 21.
 Crab, Horse-shoe, 18.
 King, 18.
 Crossbill, Red, 31, 51.
 White-winged, 31, 51.
Cucujidæ, 25.
 Cuckoo, Black-billed, 52.
Cyanospiza cyanea, 9.
Cyanurus cristatus, 9.
Cygnus americanus, 11.

D.

Dasyllidæ, 27.
 Deer, Common, 18.
Delphinus erebennus, 20.
Dendroica blackburniæ, 52.
 castanea, 52.
 cærulescens, 52.
 palmarum palmarum, 55.
 pennsylvanica, 52.
Dermestidæ, 25.
Didelphys virginiana, 40.
 Dog, Wild, 42.
Dytiscidæ, 14.

E.

- Ectopistes migratoria, 11.
 Elateridæ, 26.
 Elmidae, 26.
 Empidonax minimus, 10. 52.
 Endomychidæ, 25.
 Erotylidæ, 25.
 Erratum, 44.
 Euptoieta claudia, 56.

F.

- Falco columbarius, 11.
 Felis concolor, 2. 15.
 onca, 3.
 Finch, Pine, 31, 52.
 Purple, 32.

G.

- Geomis pineti, 24.
 Grosbeak, Pine, 32.
 Guiraca ludoviciana, 9.
 Gyrinidæ, 14.

H.

- Haliplidæ, 14.
 Hare, Northern, 49.
 Harporhynchus rufus, 49.
 Hawk, Swallow-tailed, 16.
 Helminthophaga peregrina, 52.
 Herodias egretta, 55.
 Heron, Night, 32.
 White, 55.
 Hesperomys aureolus, 39.
 leucopus, 39.
 palustris, 39.
 Histeridæ, 26.
 Hydrophilidæ, 15.
 Hylotomus pileatus, 11.

I.

- Icterus baltimore, 9.

J.

- Jaculus hudsonius, 15.
 Junco hyemalis, 8. 35.

K.

- Kinglet, Golden-crowned, 52.

L.

- Lampyridæ, 27.
 Lark, Meadow, 31.
 Lasiurus noveboracensis, 20.
 Latridiidæ, 25.
 Lebia grandis, 16.

- Lepus americanus, 49.
 palustris, 40.
 sylvaticus, 40.
 Loxia curvirostra americana, 31. 51.
 leucoptera, 31. 51.
 Lucanidæ, 26.
 Lutra canadensis, 5.
 Lynx rufus, 3.

M.

- Malachidæ, 28.
 Manatee, 20.
 Melandryidæ, 37.
 Melanerpes erythrocephalus, 10.
 Meloidæ, 38.
 Melospiza meloda, 9.
 palustris, 9. 31. 32. 52.
 Mephitis bicolor, 7.
 mephitica, 6.
 Mimus carolinensis, 49. 52.
 Mink, 5.
 Mole, Shrew, 23.
 Molothrus pecoris, 9. 31.
 Mordellidæ, 38.
 Mouse, Common, 24.
 Golden, 39.
 Jumping, 15.
 Pine, 40.
 Swamp, 39.
 White-footed, 39.
 Mus decumanus, 24.
 musculus, 24.
 tectorum, 38.

N.

- Naucleus forficatus, 16.
 Neotoma floridana, 40.
 Night Hawk, Cuban, 44.
 Nitidulidæ, 25.
 Nuthatch, Red-bellied, 53.
 Nyctiardea grisea navia, 32.
 Nycticejus crepuscularis, 21.
 Nyctinomus nasutus, 21.

O.

- Œdemeridæ, 38.
 Œdinemus dominicensis *Cory*, 46.
 Oporornis agilis, 43.
 Opossum, 40.
 Otter, 5.
 Owl, Great-horned, 19.

P.

- Panther, 2. 15.
 Papilio cresphontes, 56.
 Parnidæ, 26.
 Parula americana, 52.

Parus atricapillus, 51.
 hudsonius, 51.
Passer domesticus, 9.
Perissoglossa tigrina, 51.
 Phalacridæ, 26.
Philohela minor, 11.
Phœnicophilus frugivorus *Cory.* 45.
Picus nuttalli, 36.
 pubescens, 10 36.
 scalaris, 36.
 villosus, 10.
Pinicola enucleator, 32.
Pipilo erythrophthalmus, 9, 35, 50.
 maculatus, 35.
Plectrophanes nivalis, 32.
Pomus, 8.
Poœcetes gramineus, 8.
 Porpoise, 20.
Procyon lotor, 7.
 Ptinidæ, 28.
Puffinus borealis, 53.
 kuklii, 55.
 major, 53.
Puma, 2.
Putorius lutreolus, 5.
 Pyrochroidæ, 37.
 Pythidæ, 38.

Q.

Querquedula discors, 11.
Quiscalus versicolor, 9.

R.

Rabbit, Gray, 40.
 Marsh, 40.
 Raccoon, 7.
 Rat, Brown, 24.
 Cotton, 40.
 Swamp, 39.
 White-bellied, 38.
 Wood, 40.
 Red-poll, Common, 32.
 Holboll's, 31.
 White-rumped, 31.
Regulus satrapus, 52.
 Robin 32, 48, 53.
Rupornis ridgwayi *Cory.* 46.
Ryacophilus solitarius, 11.

S.

Salamander, 24.
Sayornis fuscus, 9.
Scalops aquaticus, 23.
 Scarabæidæ, 26.
Sciurus carolinensis, 23.
 niger, 23.

Scotophilus fuscus, 21.
 georgianus, 21.
 Shearwater, *Cory's*, 53.
 Greater, 53.
 Shrew, Mole, 22.
Sialia sialis, 49.
 Silphidæ, 25.
Sitta canadensis, 52.
 Skunk, Common, 6.
 Little Striped, 7.
 Snow-bird, Common, 35.
 Gray, 35.
 Sparrow, Swamp, 31, 32, 52.
 White-throated, 32.
Spermophilus douglassii, 30.
Sphyrapicus varius, 10.
Spizella pusilla, 9.
 socialis, 9.
 Spondyllidæ, 28.
 Squirrel, Gray, 23.
 Ground, 30.
 Southern Fox, 23.
 Staphylinidæ, 24.
Sturnella magna, 31.
Syrnium nebulosum, 11.

T.

Taxidea americana, 29.
 Telephoridæ, 28.
 Tenebrionidæ, 37.
 Thrush, *Alice's*, 49.
 Brown, 49.
 Hermit, 48, 53.
 Swainson's, 49.
 Wilson's, 48, 52.
 Wood, 48.
Trichechus manatus, 20.
 Trogositidæ, 25.
Turdus fuscescens, 48, 52.
 migratorius, 32, 48, 53.
 mustelinus, 48.
 pallasi, 48, 53.
 ustulatus aliciae, 49.
 ustulatus swainsoni, 49.
Tyrannus carolinensis, 9.

U.

Unio, 8.
Ursus americanus, 17.

V.

Vulpes virginianus, 5.

W.

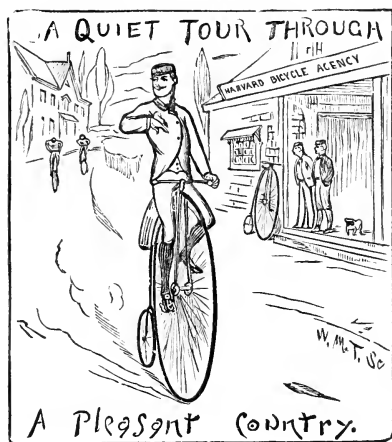
Warbler, Bay-breasted, 52.
Blackburnian, 52.
Black-throated Blue, 52.
Blue Yellow-backed, 52.
Cape May, 51.
Chestnut-sided, 52.
Connecticut, 43.
Tennessee, 52.
Western Yellow Red-poll, 55.
Yellow-rumped, 31.

Wild-cat, Common, 3.
Wolf, Gray, 4.
Woodpecker, Downy, 36.
Golden-winged, 33.
Wren, Winter, 52.

Z.

Zonotrichia albicollis, S. 32.
leucophrys, S.

END OF VOLUME II.



THE CUNNINGHAM CO.

[Established 1877.]

ODD FELLOWS HALL, BOSTON.

IMPORTING MANUFACTURERS OF

BICYCLES AND TRICYCLES.

The Harvard, Yale, and Shadow Bicycles.

The Harvard Tricycle.

For full information and prices send a three cent stamp for large Illustrated Catalogue.

C. J. MAYNARD & CO.

PUBLISHERS AND DEALERS IN

BIRDS' SKINS AND EGGS, And Naturalists' Supplies,

(Established in 1864.)

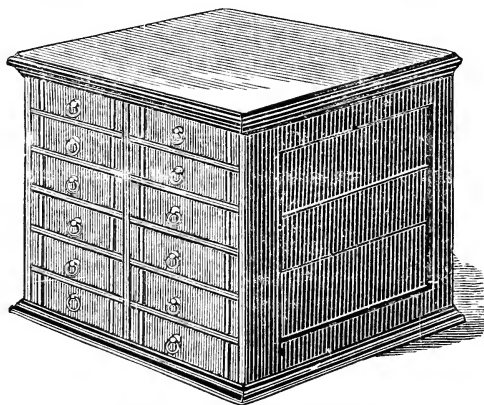
304 WASHINGTON STREET, BOSTON, MASS.

We would especially call attention to our large Stock of Birds' Eggs and Naturalists' Supplies. Send for Catalogue, addressing as above.

Livermore Stylographic Pen—An Indispensable Instrument.

The value of an article is almost always indicated by its price, and for years the people were content to pay \$3.00 for a genuine Livermore Stylographic Pen, and the same pens are yet doing good service. The success of these pens led unscrupulous persons to get up inferior imitations, which they offered at such low prices that many persons not understanding the difference, were induced to buy them. The Livermore Company, therefore, cut down the price of their short plain pens to \$2.00, and short gold mounted to \$2.50 each, to give everybody a chance to have the best article of the kind. You can buy them for that money by remitting the amount to LOUIS E. DUNLAP, Manager Stylographic Pen Co., 290 Washington Street, Boston; the pen, together with a package of superior ink will be sent by return mail, and the money will be at once refunded if they do not prove to be perfect and satisfactory in every respect. There is nothing more appropriate than a Stylographic as a gift to a lady or gentleman. The Stylographic Pen Co., who manufacture the Livermore Pen, is the largest concern of the kind in the world, with branches at New York, Chicago, and London, Eng. The Livermore Stylographic Pen is a pencil which writes ink, never needs sharpening and never wears out, and has been adopted by over 500,000 knights of the quill in this country and abroad. Any one who has learned to use a Livermore Pen will not be persuaded to do without it, and any one who has not learned to use one should get one at once.

CARROLL W. CLARK,
MANUFACTURER AND DEALER IN
LIBRARY SUPPLIES.



(CARD CATALOGUE CASE.)

Cases, Bristol Cards, and Furnishings always on hand.
27 FRANKLIN STREET, BOSTON.

Call and examine stock.

Appleton & Litchfield,

IMPORTERS AND DEALERS IN

Pocket and Table Cutlery,

— Fishing Tackle, —

Ice and Roller Skates.

APPLETON & LITCHFIELD,

304 Washington Street, Boston.

(2d door north of the Old South Church.)

GEO. B. APPLETON.

H. C. LITCHFIELD.



3 2044 103 126 223

